

# INSIDE DOPE

Learn to live and laugh—  
Thus delay your epitaph

By **GEORGE F. TAUBENECK**

## How Time Does Fly!

Baseball Puzzle  
Strike One for TV  
So Who Is Happy?  
Cleveland Clefts  
Lagniappe  
Off-Beat Baseball Addenda  
Better Off Not Knowing  
Add Ruth Stories  
Those Yankees Again

## How Time Does Fly!

Here it is September, and "Dope" hasn't delivered his second baseball column to you.

Please believe us: it isn't because we haven't listened to baseball talk in the lobby of the nearby Ft. Shelby hotel, where American League clubs stay while they're in Detroit.

Just laziness. Anyway, and here-with:

So far as we can ascertain, the first ball game ever called "on accounta volcano eruption" occurred in Alaska June 13, 1952.

Fort Richardson Post of the AAF had scheduled a game with Alaska U. for that date. Three innings were consummated when a sudden explosion of volcanic ash-and-dust blacked out the sun.

Players resorted to checkers, gin rummy, and the decimating of a copious stock of canned beer.

## Baseball Puzzle

**Question:** How can a batter have 10 pitches served to him, foul none, and still remain at bat?

**Answer:** He arrives at the plate with two out and one man on base. After his count is three and two, a runner is picked off base by the catcher—ending the inning.

Selfsame batter "plates" again in a subsequent inning, and once more runs the count to three and two.

**Total:** 10 pitches. And the man has another try.

## Strike One for TV

Television may have hurt gate receipts, but it helped Mel Parnell, stylish southpaw traded from Boston to Washington.

Consistently a good pitcher (over a period of several years), Mel did have trouble—oddly enough—with left-handed sluggers. They tagged him for extra base hits uncomfortably often.

While watching a televised game "Shanty" Hogan (who had caught for the Braves and Giants) saw something. Parnell was pitching overhand to lefties. And that was wrong, according to his experience.

"Shanty" advised Parnell to side-arm the portside power hitters. Mel tried it, and won his 100th game. Furthermore, his confidence increased so much that he continued to baffle batters he formerly had feared.

## So Who Is Happy?

Can you steal a base that is occupied? It happened in Bisbee, Ariz., in 1953.

With one out and a runner on first, Bisbee's Jimmie Cantu walked, sending Highfield to second. While the next batter missed a third strike Cantu started running, and slid into second safely.

Where was Highfield? Fortunately he saw Cantu coming, and sprinted toward third. Although he was caught in a rundown he eluded the tag. Each runner was credit with a stolen base. Bright ending to Cantu's "rock."

As usual, the Washington Senators played Southern farm clubs  
(Concluded on Page 10, Col. 1)

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## When Hurricane Hits

## Dealers Develop Various Plans To Protect Frozen Food Freezers

NEW YORK CITY—From widely scattered areas throughout New England, distributors and dealers handling Amana freezers have reported to factory officials a wide variety of assistance that they rendered to freezer users immediately after the recent hurricane struck that area.

All of the 700 customers of Oxford Food Service, Amana food plan dealer in Portland, Me., were affected in some way by "Carol," the first storm to hit. Power went off at 2:30 p.m. Tuesday, Aug. 31 in the Portland area, and an estimated 400 calls from the dealer's customers began to pour in.

Oxford instructed the users not to open the doors of their freezers, and to further advise the company when they had been without power for 48 hours. On Wednesday Oxford arranged with two local commercial cold storage warehouses, New England Cold Storage, to create facilities for Jordon freezer owners to have their frozen food stored at the plant, free of charge, until power was restored.

(Concluded on Page 4, Col. 4)

## Airtemp Divides Sales Staff Into 3 Product Areas

DAYTON—A program of market concentration designed to increase Airtemp sales in all three air conditioning markets—commercial, residential, and room cooler—was outlined to Airtemp



E. Palmer



A. J. L. Moritz, Jr.



F. J. Koehnen, Jr.

district managers in a series of regional meetings conducted recently by two factory teams.

The regional managers are now explaining the program to distributors, who are  
(Concluded on Page 21, Col. 1)

## IAEL Conference Opens Sept. 29 In Philadelphia

NEW YORK CITY—The four-day 19th annual conference of the International Association of Electrical Leagues will open Wednesday morning, Sept. 29, in the North Garden of Philadelphia's Bellevue-Stratford hotel, according to IAEL's preliminary program.

General sessions and a number of social activities are scheduled  
(Concluded on Page 4, Col. 1)

NEW YORK CITY—Quick action on the part of Jordon-New York, Inc. saved freezer owners from losing an estimated one-half million dollars in food spoilage after electric power lines were disrupted in the wake of "Hurricane Dolly" last month, it was reported recently.

When the hurricane struck the New England area on Aug. 30 each freezer owner was faced with the problem of keeping food from spoiling.

After learning from the local power company that this condition would last indefinitely, Ted Gruber, president of Jordon-New York, Long Island, N. Y., representative in that state for Jordon Refrigerator Co., immediately contacted Sayville Packing Co., Long Island frozen food locker operator.

Arrangements were made with this firm, which operates its own freezing plant, powered by its own generators, to create facilities for Jordon freezer owners to have their frozen food stored at the plant, free of charge, until power was restored.

For those who could not arrange to move their food, Jordon instructed the freezer plant to ship as much dry ice as was needed to  
(Concluded on Page 4, Col. 5)

## Appliance Firms Will Sponsor Telecasts of College Football Games

CHICAGO—Amana Refrigeration, Inc., Maytag Co., and Zenith Radio Corp. will sponsor the 13 collegiate grid games which will be seen this fall over the full television network facilities of the American Broadcasting Co.

This was announced recently by Robert E. Kintner, president of ABC; George C. Foerstner, executive vice president of Amana; Fred Maytag, II, president of Maytag; and Commander E. F. McDonald, Jr., president of Zenith.

The Amana-Maytag-Zenith sponsored games will be seen in all sections of the country except in three western states and Texas.

Televiewers in the three western states—California, Oregon, and Washington—will see the games through the commercial backing  
(Concluded on Page 4, Col. 3)

## Evis Asks Dismissal Of Charges by FTC

WASHINGTON, D. C., Sept. 16—Counsel for Evis Mfg. Co. went into their third day of oral arguments seeking dismissal of the Federal Trade Commission complaint which charges that Evis promotion of claims for its water-treating device was misleading.

FTC officials said that it was "most unusual" for such oral arguments to take more than a day.

The Evis attorneys are seeking to strike out the testimony offered by the FTC, and are asking a dismissal of the case, without the presentation of any direct testimony by witnesses for the company.

## Menzies Is Elected Servel President

EVANSVILLE, Ind. — Duncan Cameron Menzies has been elected president, general manager, and a director of Servel, Inc., succeeding W. Paul Jones who becomes vice chairman of the board, Louis Ruthenberg, chairman, announced recently following a meeting of the board.



D. C. Menzies

Menzies is vice chairman of the executive committee and a director of Ball Brothers, Inc. of Muncie, Ind. He was executive vice president and general manager of that company from 1950 until June of this year when his assignment was completed there.

Menzies has had extensive industrial experience, having been connected for many years with Johnson & Johnson as assistant to the president and as vice president of the Johnson & Johnson Research Foundation. He is a director of Kent Plastics Corp., Aridor Co., Fansteel Metallurgical Corp., and  
(Concluded on Page 4, Col. 2)

## See FTC Dairy Case Hearings Going to '55

WASHINGTON, D. C. — Initial hearing on the Federal Trade Commission complaint charging the Borden Co. with unfair trade practices, including the sale and leasing of equipment to retail accounts, was held here Sept. 14, and consisted mainly in the identification of documents supporting the complaint.

The hearing was then recessed to Nov. 16 in Washington.

It is believed that direct testimony from refrigeration contractors and others will not be taken until after Jan. 1, 1955.

## N. Y. Room Cooler Sales To Dealers Pass '53

NEW YORK CITY—Sales of room air conditioners to dealers in the New York City area through the first week of September totaled 101,000 units, according to figures compiled by Consolidated Edison Co.

This represents an increase of 6,700 units over the 94,300 figure which Consolidated Edison reported on room air conditioners for all of 1953.

These figures are strictly sales to dealers. No estimate was given on the number of units in dealers' inventories.

## Sales of Residential Systems In Houston Area Rise 31%

HOUSTON, Texas—A 31% increase in the sale of residential year-round air conditioning systems on the lines of the Houston Lighting & Power Co. was recorded in the first six months of 1954, as compared with a similar period in 1953, the utility reports.

Unit sales were 508 for the first six months of 1954, and 388 for the first six months of 1953.

## Auto Cooling Ups Profits Of Car Dealers

## Texas Firms Find Initial Demand Greater Than for Automatic Transmissions

DETROIT—To automobile dealers, air conditioning is fast becoming a bright star on the profit horizon. It has helped to sell cars, increased floor traffic, and is beginning to add substantially to income in the service department.

One Dallas dealer has had a volume of \$160,000 in air conditioning sales and service this year. Another sold 700 installations. A Houston dealer had 18 cars sold but customers wouldn't take delivery until the air conditioning was installed.

These reports came from an analysis of the auto air conditioning market conducted during August by Packard Motor Car Co. as the end of the season for volume sales of auto air conditioning units approached. The study was concentrated in Texas to delineate air conditioning requirements, study the most successful merchandising programs, and set up a service training program.

Air conditioning came to higher priced cars in a rush last year with first factory installations on a volume basis, although field kits for dealer installation had been on the market since 1949. Its progress had been a surprise to industry observers.

Initial demand has exceeded the demand for power steering and automatic transmissions when  
(Concluded on Back Page, Col. 1)

## Norge To Market Built-In Ranges

CHICAGO—Norge Div. of Borg-Warner Corp. has purchased the tools, dies, and fixtures of the Leeson Steel Products Div. of Thor Corp. and production of built-in ranges bearing the Norge trade name will start at once at the Leeson plant in Bloomington, Ill.

It is reported Norge will also produce the Presteline brand of built-in ranges, which is marketed nationally by George T. Stevens & Associates.

The move was described by Judson Sayre, Norge president, as the second step in developing Norge strength in the range market. Pointing out that it was his belief that all major appliance manufacturers will some day be producing built-in ranges, he declared that "the acquisition of one of the pioneers should put Norge ahead."

A Thor Corp. official said that the selling of the range-building equipment puts Thor out of the range business and is another move in its recently announced policy of concentrating on production of laundry equipment.

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## Increased Demand Taxes Jordan Plant

PHILADELPHIA — Jordan Refrigerator Co., since it began production in its new \$1,000,000 plant in northeast Philadelphia in May, has enjoyed such an increase in demand, that it is actually taxing its present facilities, Harry Fogel, executive vice president, said.

He said sales of its upright home freezers, its "Duplex" combination freezer-refrigerator, and its expansive commercial line of refrigerators and freezers are up 25% over last year so far in 1954.

Fogel said he could not estimate actual gross sales for Jordan this year, but that "they will be far ahead of 1953 in all categories."

"I still feel that the home freezer market has not yet been scratched and that it is virtually unlimited for products that are designed to meet the specific needs of the homeowner or apartment resident."

"As more and more frozen foods are consumed, the freezer gradually will become an essential item in the kitchen."

He predicted that home freezer sales will continue to be made through specialty selling, such as food plans, rather than normal major appliance departments.

To meet this growing demand, Fogel said, plans are still very much alive to construct additional production space on the 20-acre plot at 7900 Tabor Rd. here.

## Hauf To Try Closing Store on Mondays

ALBANY, N. Y. — John B. Hauf, Inc., appliance store at 175 Central Ave., announced it has changed its shopping schedule and will be closed Mondays and open for business only Tuesdays through Saturdays.

The new schedule is intended to bring more efficient operation without changing the employees' five-day work week. The six-day shopping schedule, with some employees off every day, has meant operating "with five-sixths of our organization, which has resulted in shortened personnel and lessened service," John R. Hauf, vice president and treasurer, said.

Hauf called the new schedule an "experiment" for an indefinite period which was being "undertaken with a serious question in the minds of the officers of Hauf's as to whether the public will give its approval." He said the firm will welcome reactions to the change, made in person, by letter, or phone.

He added: "If the move is a forward one in the direction of progress, no doubt a large segment of retailing will follow in Albany as has been the case in other cities. On the other hand, if customers feel that this is disadvantageous to them, it may be necessary to modify or abandon the idea. There is no thought of returning our staff to a six-day work week, however."

## G-E Shows Heating And Cooling Lines To Mortgage Bankers

BLOOMFIELD, N. J. — The Home Heating and Cooling Dept. of the General Electric Co. will be among the exhibitors at the Mortgage Bankers Association Exhibit in Chicago, Sept. 27 to 30.

The General Electric booth will feature the complete G-E line of heating and cooling equipment for homes of all sizes and will display the G-E downflow year-round air conditioner with air-cooled condenser. The Air-Wall distribution system will also be shown.

W. A. Mulcock, regional manager for the Chicago area, will be in charge of the booth and will be assisted by W. M. Obye and L. D. Nutter of the Home Heating and Cooling Dept.'s field staff along with personnel of R. Cooper, Jr., G-E distributor in the Chicago area.

Mulcock stated that the growing trend to air conditioning made it necessary for mortgage bankers to be fully informed on this newest phase of home modernizing in order to guard against obsolescence.

He said G-E would place special emphasis on installing heating first with built-in provisions for adding air conditioning to the home at a later date.

General Electric's exhibit will occupy booth No. 30, Conrad Hilton hotel.

## Westinghouse Sponsors 'Best of Broadway' on TV

COLUMBUS, Ohio — Westinghouse Electric Corp. recently launched a new series of 10 hour-long plays and musical comedies—selected from the great stage shows of Broadway during the past three decades—which it will present in full color and black and white over the largest line-up of live stations on CBS television, the company announced here.

It is the first regularly scheduled series of color TV programs, according to Westinghouse.

The new series, entitled "The Best of Broadway," will be seen every fourth Wednesday. The first play, "The Royal Family," was staged Sept. 15. Other fall dates are Oct. 13, Nov. 10, and Dec. 8.

The October play will star Monty Woolley in "The Man who Came to Dinner." In November Ethel Merman will star in "Panama Hattie." Other plays to be presented include "Arsenic and Old Lace," "The Philadelphia Story," "The Petrified Forest," and "The Time of Your Life."

The series will originate on Broadway itself—in CBS Television's giant new color studios now being completed. All of the plays will be seen "live" from 9 to 10 p.m., E.S.T. Approximately half of the 99 stations in the line-up will telecast the series in full color.

Betty Furness will chalk up another "first" for herself when she appears as product demonstrator for Westinghouse on the show, the company said.

"She will be the first woman announcer to appear on a regular all-color series, just as she was the first woman announcer to invade the commercial television field back in 1949," Westinghouse stated.

One of the factors Betty must consider in being telecast in color across the nation, the company pointed out, is that of "the right costume color to match the product she's selling, be it an electric iron or a copper-styled range."

Betty will also continue her weekly appearances each Monday evening on "Studio One" as the award-winning dramatic series—which begins its seventh season on the air this fall—is continued under Westinghouse sponsorship.

This season "Studio One" will be carried on an expanded national network of 94 stations, including showings by kinescope, or TV recordings, on stations as far distant as Honolulu and San Juan, Puerto Rico.

## Deepfreeze Offers Special Sales Kits at Low Prices

N. CHICAGO, Ill. — Supporting its current fall freezer campaign and refrigerator dealer roundup, Deepfreeze Appliance Div., Motor Products Corp., is offering special packages of sales promotion materials at special prices during September.

The promotion packages, one for freezers and one for refrigerators, are selected to provide all the materials needed to get a new dealer started with the Deepfreeze line. Ranging in content from floor displays to pocket-size fact cards, the kits will be available for the limited period at less than cost.

## ATTENTION FRIGIDAIRE DEALERS

Add-A-Bin Ice Storage Units  
FOR FRIGIDAIRE CUBERS

1. Increase the storage capacity to 500 pounds.
2. Permit a reserve supply of cubes to be built up.
3. ENABLE SOME TYPES OF USERS TO GAIN HUNDREDS OF EXTRA POUNDS OF CUBES WEEKLY.

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## Keeping Carrier's coolers quiet

A room air conditioner is a mighty fine aid to comfortable summertime sleeping, provided it does its job quietly. Thus, most of the big manufacturers like the Carrier Corporation at Syracuse, New York, use fibrous glass insulation to muffle any noise or vibration which might interfere with sound slumbers.

Carrier uses 3M's EC-104 adhesive to quickly and firmly attach this filmy insulating material to motor housings and other curved metal surfaces within their unit. A quick brush coat of adhesive . . .

press the fibrous glass pad in place, and the assembly moves down the production line without a hitch.

See what adhesives can do for you . . . Next time you're faced with the problem of bonding together dissimilar materials, consider the advantages 3M Adhesives offer. Send for our latest Designer's Handbook which shows how better designs and lowered unit costs can be achieved with the aid of these modern bonding materials. Address your request to 3M, Dept. 1410, 417 Piquette Ave., Detroit 2, Mich.



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## IAEL Conference--

(Concluded from Page 1, Col. 2) for the first three days. The group's annual business meeting will be held Saturday morning, Oct. 2. The general sessions are open to anyone in the electrical industry.

Following are some of the highlights of the program:

## WEDNESDAY, SEPT. 29

10 a.m.—General session. Address (title to be announced), John M. Otter, executive vice president, Philco Corp.

"Legal Aspects of Trade Association Work," George P. Lamb, Kittell & Lamb, Washington, D. C. 2 p.m.—General session.

"Room Cooler Installations—Residential and Commercial," George S. Jones, Jr., managing director, Air-Conditioning & Refrigeration Institute.

"Diversity Factor In Residential Loads," A. E. Bush, assistant controller, Detroit Edison Co.

"Rewiring of Residences," Cincinnati Plan—E. J. McGinnis (treasurer, IAEL); Omaha Plan—D. E. Rosenthal (governor, IAEL); Chicago Plan—C. C. Simpson; bank representatives (Philadelphia).

## THURSDAY, SEPT. 30

9 a.m.—General session. "The Distributor's Viewpoint," W. G. Peirce, president, Peirce-Phelps, Inc., Philadelphia.

## FRIDAY, OCT. 1

9 a.m.—General session. "Trade Educational Programs for Public Benefit," E. A. Cornish, director, Research Dept., National Electrical Contractors Association. "Residential Electrical Space Heating," Panel.

2 p.m.—General session. Panel discussion of league activities. Licensing dealers for appliance installations, telephone directory listings—G. L. Logan (governor, IAEL), Los Angeles; home economist educational programs—V. W. Hartley (past president, IAEL), Los Angeles.

## SATURDAY, OCT. 2

8:30 a.m.—Breakfast and annual meeting.

## Serval Names Menzies--

(Concluded from Page 1, Col. 4) Ball Department Stores.

Jones became president and general manager of Serval in 1949. As vice chairman of the board he will serve in an advisory capacity. Ruthenburg was president and general manager of the company from 1934 until he was succeeded by Jones. Since 1949, Ruthenburg has been chairman of the board.

Born in Scotland in 1902 and educated in England, Scotland, and Canada, Menzies started his business career in Winnipeg.

## Jones To Divide Time Between Kellett, Serval

CAMDEN, N. J.—W. Paul Jones, vice chairman of the board of Serval, Inc., will become president of Kellett Aircraft Co., manufacturer of military helicopters, effective Oct. 1, it was announced here.

Jones, who has been chairman of the 25-year-old aircraft company for the past four years, will also continue to serve in that capacity.

Jones said he would divide his time between Evansville and Philadelphia-Camden, devoting as much attention as possible to the operating affairs of Kellett Aircraft. The company long has been active in aircraft research and development programs, specializing in the helicopter field.

Jones served as president of Serval for five years before his election to the vice chairmanship of the board. During that time the company produced wings for F-84 Thunderjets and Thunderstreaks, and aircraft parts and components, including machining of newly-developed forged spars.

Before his association with Serval, he was vice president and director of Philco Corp. in charge of the refrigeration division. Before joining Philco he was an executive vice president at Fairbanks-Morse Home Appliances and was president of Refrigeration Products Co. in Evansville, Ind.

## Football Games--

(Concluded from Page 1, Col. 3) of the Carnation Co. Humble Oil & Refining Co. sponsors the showing of the grid battles in Texas.

Amana will provide sponsorship of the outstanding National Collegiate Athletic Association football games on behalf of its home freezers and home air conditioning units. Maury, Lee, & Marshall Advertising Agency of New York placed the business for its client.

Maytag will advertise its full line of laundry equipment. McCann-Erickson, Inc., Chicago, is Maytag's agency.

Zenith will advertise television and radio sets on its portion of the telecasts. The contract for sponsorship was placed for the firm by Young & Rubicam, Chicago.

The full NCAA football schedule on the ABC-TV network includes 12 Saturday afternoon games and a Thanksgiving Day event. The series started Sept. 18, with the encounter between the University of California and Oklahoma.

The remainder of the schedule follows:

Sept. 25—Iowa vs. Michigan State, Iowa City; Oct. 2—Stanford vs. Illinois, Palo Alto; Oct. 9—Wisconsin vs. Rice, Madison, Wis.; Oct. 16—Oregon vs. Southern Calif., Portland; Oct. 23—Pittsburgh vs. Northwestern, Pittsburgh; Holy Cross vs. Boston U., Worcester, Mass.; Montana vs. Brigham Young, Provo, Utah.

Oct. 30—Pennsylvania vs. Penn State, Phila.; Nov. 6—Baylor vs. Texas, Waco, Texas; Nov. 13—Georgia Tech. vs. Alabama, Atlanta; Nov. 20—Ohio State vs. Michigan, Columbus; Nov. 25—Maryland vs. Missouri, College Park, Md.; Nov. 27—Army vs. Navy, Philadelphia.

Dec. 4—Notre Dame vs. SMU, Dallas.

Handling the account of the field action will be Announcers Jack Drees and Tom Harmon. Bill Stern will do the pre and post-game programs, and supply color during the games.

## Dealers Help Hurricane-Hit Freezer Owners

(Concluded from Page 1, Col. 2) age and Northeast Cold Store, to accept their users' frozen foods if boxed and delivered to the warehouse. An employee was stationed at each of the warehouses to expedite this operation.

On Thursday about 200 Oxford customers delivered some 60,000 lbs. of food to the two warehouses, filling the available space. Then Oxford rented the entire warehouse of the Jordan Ready-to-Eat Meat Co.

Putting two trucks on the job, and working around the clock, the firm picked up about 30,000 lbs. of food from 100 customers.

There were some customers without phone service who couldn't be contacted, so Amana's offer to reimburse their freezer users who had suffered any losses came as a welcome surprise. A news story on the offer was published in the *Portland Sunday Telegram*, and Oxford devoted its advertising on the locally sponsored Drew Pearson show to this offer.

Over the Labor Day weekend (Sept. 4-7) when power began to be restored Oxford kept in touch with the power company, learning when power was restored to various areas, and then returning the food to customers.

## 18 FREEZERS SUBMERGED BY 'EDNA'

"Then," says Robert Roy of Oxford, "hurricane 'Edna' came to Portland. Now water damage, rather than wind, was the problem. Some 18 freezers were submerged and these are being rehabilitated, although the food was a complete loss.

"We worked around the clock to maintain the public confidence and to hold their losses to a minimum. We feel we have an army of grateful customers and friends for Oxford and Amana."

## POWER OFF FOR 3 DAYS

In Connecticut the towns of Milford, Westport, and Southport were among the hardest hit. In many homes in these shore areas the water stood two feet deep in the basements after the hurricane had passed.

Society of Freezer Owners, Inc., Stratford, Conn. dealer for Amana, supplied dry ice to consumers who were without power for more than three days, and also stored some customers' food in freezers in its own stores.

From Arnold Tower, B. M. Tower Co., Bridgeport, Conn. distributor for Amana, the dealer heard of Amana's offer to make good any storm damage, and transmitted this offer to customers. The dealer's salesmen are now using a reproduction of the Amana offer in selling new prospects.

In Boston, M. Feinstein, president of Appliance Merchandisers, distributorship, advertised the Amana offer on the front page of

the *Boston Globe*, *Herald Traveler*, *Boston Post*, and *Worcester Telegraph*. News stories appeared in several Boston papers, and the Amana telegram was reproduced and sent to 500 dealers.

"As a result," Feinstein reports, "few people in the state failed to hear about the offer. We were swamped with phone calls of gratitude from customers and some called it 'one of the greatest acts of friendliness ever carried out by a business concern.'"

Areas in which the power was off less than 72 hours reported no food spoilage, Feinstein said, and in a number of places where the power was off for a longer time owners were able to save a good part of the food.

Providence was badly hit, and Penguin-Amana, food plan dealer, had 13 freezers in a public warehouse whose roof was blown off and was completely flooded. These freezers are being rehabilitated by the manufacturer.

The offer to users was advertised in newspapers, and users were notified by telephone, and according to Bill Thomas of Penguin-Amana, "the whole city is talking about this unique gesture, affirming public confidence in freezers."

## Keep Food In Stores--

(Concluded from Page 1, Col. 3)

keep the food frozen for a few days.

To notify their customers of the availability of this service, the firm had announcements broadcast on local radio stations, and also used personal phone contact where this was possible.

"The response to this free service was overwhelming," the report said. "It has been estimated that from one to two thousand claims for food spoilage were averted, with an approximate savings to homemakers of about one-half million dollars."

## St. Louis Water Charge On Cooler Users Put Off

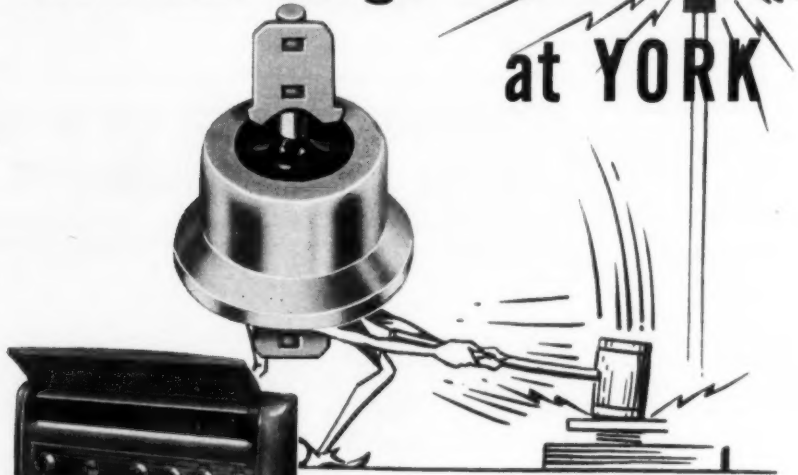
JEFFERSON CITY, Mo.—The Missouri Public Service Commission has suspended, pending an inquiry, a new water rate tariff proposed by St. Louis County Water Co. which would impose an annual surcharge on operation of water-using air conditioners not equipped with water savers.

First hearing was scheduled for Oct. 18 here.

The tariff would have become effective Sept. 30. The commission's action makes it inoperative for 120 days.

If approved, the surcharge would be \$40 a year per ton of cooling capacity. The company said it did not actually plan to collect the surcharge until May 1, 1955.

## FUSITE'S New Single Terminal Rings the Bell at YORK



The two newest developments in Fusite glass-to-steel hermetic compressor refrigeration terminals are the tab connector for higher horse power solderless applications, and the small single electrode terminal.

York now combines both of these features in their completely hermetically sealed air conditioners... using 3 of these new terminals in all units up to 1 H. P.

The large majority of domestic refrigerator compressors have been using Fusite Terminals for some time. With new higher ratings made possible by the tab connector, Fusite bids fair to capture just as large a share of the vast air conditioning market.

Samples of the new tab-type terminals are available in single or three electrode models.

Write Fusite. Dept. R.



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Experts predict 1,500,000 air conditioners will be sold this year! Get your share of the booming market for covers with INTERNATIONAL—the first, the finest, made of genuine Firestone Velon. It's heavier, it's trouble-free, it's the best made. Get the jump on the market... let us show you how with our cooperative advertising plan... get the facts.



Retails from \$6.45 to \$8.45

27 styles to fit every leading make from 1/3 to 1 ton, 1951 to 1954 models. INTERNATIONAL COVERS, INC. 39 GREAT JONES STREET, NEW YORK 12, N. Y.



## Survey!

## U. S. Chamber of Commerce Studies Discount Problem

WASHINGTON, D. C. — The Chamber of Commerce of the United States is now compiling results of a questionnaire mailed to more than 200 retailers, wholesalers, and manufacturers to find out how much business the discounters are doing in traditional markets, what countermeasures are planned, and other information.

Firms receiving the questionnaire were asked to estimate what percentage of the total volume of business, line-by-line, is accounted for by discount houses, direct selling organizations, employee buying clubs, etc.

## ASK FOR SOLUTION

The chamber's domestic department also wanted to know: "How do you plan to compete with this type of competition?"

The chamber asked, for example, if distribution firms plan to urge manufacturers and suppliers to take corrective action; conduct similar price-cutting activities themselves; or press for compliance with fair trade laws and enactment of new price maintenance legislation.

Also, if they intend to negotiate exclusive franchises from suppliers; drop "price football brands"; request newspapers and other advertising media not to accept price-cut advertisements from discounters; or otherwise engage in stronger competitive merchandising.

## GOVERNMENT FREEZE?

Another question was: "Do you think any of your suppliers are maintaining list prices because they expect a government freeze edict during the next 12 months?"

Other questions pertained to the Federal anti-trust laws. The chamber asked if these laws are satisfactory as they stand; if the Robinson-Patman Act should be strengthened to ban any kind of price discrimination regardless of volume, type of business, etc.; if delivered price selling should be permitted; if franchise contracts prohibiting resale below list price should be allowed; and if "phantom freight" charges should be banned.

## TRADE DISCOUNT POLICY

An additional question had to do with the "best trade discount policy on the part of your manufacturer and other suppliers."

In asking this question, the chamber wanted to know if the same traditional discount should be given all customers, regardless of volume or type of business; if the discount structure should be related to total annual volume by specific merchandising lines; and if functional discounts, according to type of customer (retail, wholesale, or consumer) should be used.

Also, if the discount structure should be set up on an individual contract basis with each customer; if a cumulative discount structure should be used so that discounts would increase with rising volume during the year; or if some other trade discount policy would be preferred.

## JUST ASK US!

Turn to "What's New" Page for useful information on new products.

## Popcorn Promotion Prepares Prospect For Hotpoint Pitch

CHICAGO — Consumers don't have to go to the movies or a baseball game to get America's favorite munching tidbit—popcorn. They can drop in any Hotpoint appliance dealer's store and ask for it. It'll be ready in about 90 seconds.

In an effort to show the speed of its electric range surface units, Hotpoint Co. has made a trade deal with a popcorn manufacturer to supply its dealers with a new handy demonstration device. A complete popcorn package—popcorn, oil, and salt—all in an aluminum foil disposable popper, is used.

"All the dealer does is set the disposable popper on the 'Calrod' surface unit, pop it, and serve," the company pointed out. "As the corn pops, the container top blows up like a balloon, giving action, noise, and excitement."

"While the popcorn is popping, the dealer can be giving the prospect a 90-second sales pitch. Then they can eat the popcorn, while the dealer continues his sales talk."

## Ebasco Services Names Millott Sales Consultant

NEW YORK CITY—A. T. Millott has joined Ebasco Services, local business consulting firm, as a sales consultant in its sales marketing and public relations department.

Millott was formerly national food freezer sales manager for the General Electric Co. Since 1929 he has been prominent in the pioneering and development of frozen food and food freezers. He joined General Electric's refrigeration department back in 1928.

He also has been president of Conditioned-Air Equipment Co. of Minneapolis and St. Paul, as well as president of Freezers, Inc., a frozen food outlet.

In his new assignment Millott will be active in the utility and general industrial fields serving as a sales and marketing consultant.



A. T. Millott

## Tri-State Distributes Coolerator In E. Tenn.

DULUTH, Minn. — Appointment of the Tri-State Supply Co. as distributor of Coolerator appliances in the Chattanooga and Knoxville, Tenn. areas, was announced recently by G. L. Hartman, director of sales and advertising, of the Coolerator Co.

Key personnel of the distributorship are Charles W. Bower and Edward T. Bower.

Offices of the Tri-State Supply Co. are located at 1148 Market St., Chattanooga and 102 Tazewell Pike, Knoxville. The franchise includes a territory of 35 counties in eastern and southeastern Tennessee, six counties in southeast Kentucky, seven counties in northwest Georgia, and one county in northeastern Alabama.

J. F. Wirtz is the Coolerator regional sales manager in the territory. The Coolerator district sales manager is David Harvey, Jr.

## July Home Freezer Sales Rise In Territory Served By West Penn Power Co.

PITTSBURGH — Home freezers were the bright spot among the major appliances, the one product sold in greater volume during July than in July, 1953, a report of dealer sales in southwestern Pennsylvania issued by the West Penn Power Co. indicated recently.

Freezer sales for the month were up 4% over the same month last year.

Automatic washer sales were down 4%, room coolers and clothes dryers 5%, refrigerators 15%, ranges 18%, water heaters 22%, conventional washers 24%, ironers 40%, and dishwashers and garbage disposers 50%.

Comparative unit volumes for July in 1953 and 1954 are as follows:

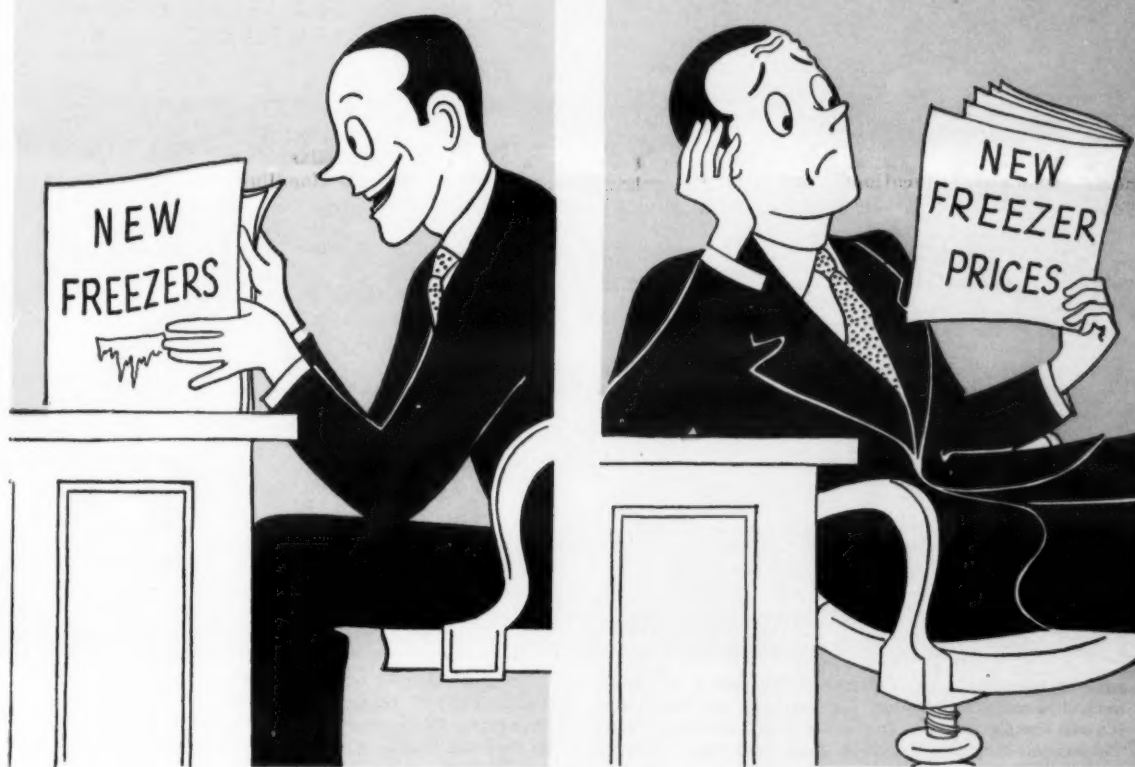
Appliance	July, 1954	July, 1953
Refrigerators	1,749	2,060
Home Freezers	502	482
Room Coolers	209	220
Dehumidifiers	40	...
Ranges	733	884
Dishwashers	30	59
Garbage Disposers	25	49
Clothes Dryers	282	296
Ironers	75	123
Automatic Washers	550	570
Conventional Washers	1,024	1,343
Water Heaters	336	426



## Climatrol Dehumidifier Comforts Chinchillas

WARM AND HUMID Houston, Texas isn't an ideal place to raise chinchillas, but Mr. and Mrs. J. W. Beasley, owners of the Cooperative Chincilla Ranch of Houston, have increased their herd from two to 85 by carefully controlling the air in the furry animals' living quarters. Although a room air conditioner provided a cool atmosphere for the little rodents, Houston's humid climate still presented one difficult hurdle—too much humidity. Mrs. Beasley (left) got the answer from Bert Fisher (right), owner of the Southern Furnace and Supply Co. of Houston. Fisher suggested a Mueller Climatrol dehumidifier. According to Mrs. Beasley, her chinchillas have been much healthier and more active, and the hot, humid, Houston weather can't compete with the room air conditioner and dehumidifier. "The Mueller Climatrol dehumidifier removes 16 pts. of water every 24 hours on the average, from the 12 by 10-ft. room, even with the room air conditioner operating which removes some of the humidity," Mrs. Beasley said. Expanded operations are planned by the Beasleys with a dehumidifier in each new building.

When he's BITING ..... but not BUYING



Be ready to land him with

## COMMERCIAL CREDIT PLAN FINANCING

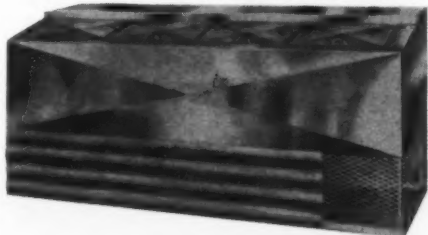
MOST of your prospects need their working capital and usual lines of credit for current operations. To make sure they buy now . . . and from YOU . . . include COMMERCIAL CREDIT PLAN financing in your recommendations. More than 300 offices to serve you nationally. When can we tell you our story? Phone our office in your city or wire COMMERCIAL CREDIT CORP., 14 Light St., Baltimore 2, Maryland.

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## "A CASE OF COOL JUDGMENT"



## FLO-COLD DRINKMASTER STAINLESS STEEL CUBER — COOLER.

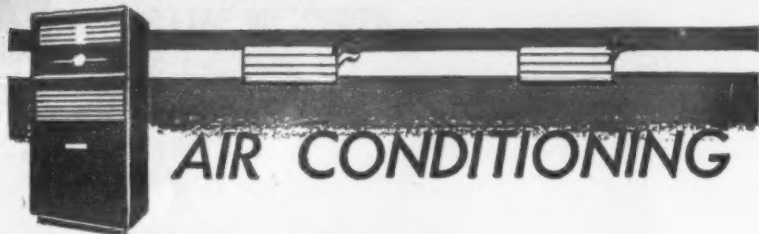
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WRITE

United Friguator Engrs. MENOMINEE, MICH.

AVAILABLE IN SIZES 4 TO 10 FT.





Candy and Employees Like It, Too!

## Air Conditioning Brings More Customers Into Store and Keeps Them There Longer

MANSFIELD, Ohio—Every year the Shaw and Ott drugstore here makes a major improvement to keep the store strictly modern.

This year the firm installed a 5-ton air conditioner.

Additional benefits were forthcoming immediately after the unit was installed, report co-owners David Ott and Richard B. Shaw. Customers who came into the store for specific items stayed to cool off and browsed around the self-service sections. This helped customers get better acquainted with the variety of merchandise the store carries.

The air conditioning was particularly beneficial in the evenings, Ott remarked. Then, out to escape a stuffy night at home, people would patronize the soda fountain and then browse around the store to remain cool. This has led to

increased impulse sales, the co-owners report.

Another advantage the air conditioning has offered is to permit the store to handle a line of chocolate candies during the hot, summer months. It keeps the candies cool and attractive and in better merchandising condition, they said.

The new cooling system has not only brought customers into the store in greater numbers and more often, but it has also improved the spirits of employees, the owners declared.

### Better Days Ahead

NEW ORLEANS—Air conditioning of all patient floors is planned for the Southern Baptist hospital here, Dr. Frank Tripp, executive secretary for the hospital board of directors, announced recently.

## Weathertron Names Wynn To Cover 5-State Territory

BLOOMFIELD, N. J.—The appointment of Herbert J. Wynn as field representative for the General Electric Co.'s Weathertron Dept. has been announced by Jack S. Beldon, marketing manager of the G-E Air Conditioning Div.

Wynn will be responsible for sales of the Weathertron heat pump in western Pennsylvania, West Virginia, Kentucky, Ohio, and Indiana. He will have his office in Canton, Ohio.

For the past eight years Wynn has been an air conditioning specialist for the Ohio Power Co. He is a native of Canton and attended Ohio State university.

## Servel Appoints Geishert, Ashby to Engineering Posts

EVANSVILLE, Ind.—Dr. Carl T. Ashby, chief engineer for refrigerators and freezers at Servel, Inc., has been appointed to the same post for "all-year" air conditioning, it was announced recently by T. W. Rundell, vice president in charge of operations.

Edwin C. Geishert, assistant chief engineer for room air conditioners, was named to head a separate engineering department for room air conditioners and compression-type air conditioners.



OUTDOOR MOUNTING is a space-saving feature of the air conditioning installation of the Central Presbyterian Church, Kansas City, Mo. A 55-ton cooling tower is used to provide for possible building expansion.

## When Church Is Cooled More Pews Are Full On Sunday, Kansas City Church Discovers

KANSAS CITY, Mo.—Dramatic proof of the value of air conditioning was furnished the Central Presbyterian Church here in June when a comparison of attendance figures before and after air conditioning showed the following results:

1953	1954
575 June, first Sunday	588
458 June, second Sunday	615
460 June, third Sunday	608
460 June, fourth Sunday	558

Central Presbyterian Church has a total membership of 800 people. Four 10-ton General Electric

packaged units mounted on platforms outside the windows maintain a temperature of 80° F. inside the church when it is 100° F. outside.

Outdoor mounting of the units saves valuable space inside the church proper and in its basement. A 55-ton cooling tower is used to provide for possible building expansion.

Henry Frazer of Air Contractors, Inc., Kansas City, was contractor and engineer on the job. Frazer has been selling and installing G-E air conditioning equipment for 23 years.

## ASHVE Appoints Charles Hotchkiss To Edit Its Journal and Bulletins

NEW YORK CITY—Appointment of Charles H. B. Hotchkiss as editor of the *Journal of The American Society of Heating and Ventilating Engineers* was announced recently by A. V. Hutchinson, executive secretary.

Hotchkiss will also edit *ASHVE Transactions* and other technical bulletins. He brings to this position practical experience in both engineering and publishing, and has been active in society affairs since 1927 and has served on many technical committees.

From 1930 to 1940, Hotchkiss served as editor of *Heating & Ventilating* after having been an assistant professor at Pennsylvania State college from where he received his B.S. and M.E. degrees. He left Pennsylvania State college to teach heating and ventilating at Purdue university from 1925 to 1930.

In 1940 he became vice president of Ameresco, Inc., New York City, which specialized in exporting heating, air conditioning, and other engineering equipment.

In 1950 he organized Endeco,

Inc. which engaged in work on top classified subjects related to radar and sound transmission.

For the past two years he has been with H. K. Ferguson Co., working here on large industrial plant design and construction of a Canadian project.



NEWEST PRODUCT in the air conditioning field is Worthington's ultra-modern winter and summer home air conditioner. It's one compact package that heats, cools, circulates, filters and controls humidity. Get all the facts about this fast-selling

unit—and the rest of Worthington's full line of air conditioning and refrigeration equipment by writing to Worthington Corporation, Air Conditioning and Refrigeration Division, Section A.4.49, Harrison, New Jersey.

## We made 1954's biggest air conditioning news!



NEWEST BUILDING in New York is the glass-sheathed Manufacturer's Trust Building. It's cooled by a Worthington central station system—so big it does the same job as melting 300 tons of ice daily.



NEW LIFE FOR OLD STORES. Shoppers stay longer, buy more in stores cooled by Worthington units with the new "Million Dollar" compressor. New 3-D circulation aims comfort right where it's wanted.



NEWEST FACTORY. New plant in Decatur, Alabama was built to meet the ever-increasing demand for Worthington packaged air conditioners. In 1954, more Worthington packaged units were sold than ever before.

A.49

# WORTHINGTON



THE BEST FRANCHISE...THE MOST COMPLETE LINE

## E-Z-SEE LIQUID INDICATOR



NEW FLO INDICATOR FLAP SHOWS ALL FLOW CHANGES

Analyze flow, function of expansion valve, by means of E-Z to SEE sensitive flap, instantly responsive to variations in flow. Positively leak-proof—hundreds of thousands in use.

Available at Wholesalers everywhere

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## MIDWEST CENTRIFUGAL PUMPS

- EVAPORATIVE COOLERS
- CONDENSATE PUMPS
- BEVERAGE COOLERS
- HUMIDIFIERS
- TO YOUR SPECS.



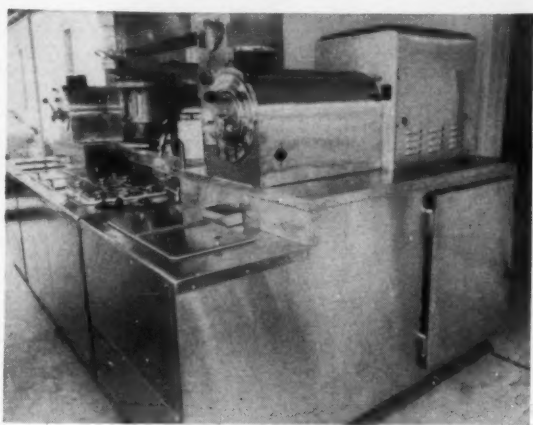
25-42-50-60 CYCLE  
6-12-110-220 VOLT AC-DC  
HEADS UP TO 10 FEET  
GPH UP TO 225 GAL. AT 6 FOOT

We solicit inquiries

TECH-TRON CORP.

LAWRENCE, KANSAS





'O-So-Good' soft ice cream freezer.

## 'O-So-Good' Fully Automatic, Continuous Soft Ice Cream Freezer Cleans Easily

RIVER EDGE, N. J.—A new "O-So-Good" fully automatic, continuous freezer for the soft ice cream trade has been developed by the Cidega Machine Mfg. Co., Inc. here.

With 21 years of experience in the manufacture of precision machinery, Cidega was able to make a freezer which reduces considerably the time and effort required to clean it, the company claims.

No wrenches are needed for disassembly of the O-So-Good freezer. All removable parts are equipped with bayonet type fittings. The smooth stainless steel cylinder requires no brushing, but is automatically flushed with cleansing solution. Maximum cleaning time

is only 10 minutes, the company says.

The O-So-Good operates by direct drive. There are no belt replacement or adjustment problems. The agitator and cylinder are machined and assembled to such close tolerances that, although efficient "wipe" is assured, the manufacturer guarantees that the agitator blades will not scratch the surface of the cylinder under normal operating conditions.

The mix in the O-So-Good freezer is under constant refrigeration from feeding tank to nozzle, and the temperature is automatically controlled, within  $2\frac{1}{2}^{\circ}$  F., even when the machine is not in operation.

Approved by all health authorities, the O-So-Good soft ice cream freezer also makes sherbets and ices. The O-So-Good machine is sold outright to independent retailers. There are no rental or franchise deals involved, the company said.

### D. G. Singer Joins Warren As Assistant Export Mgr.

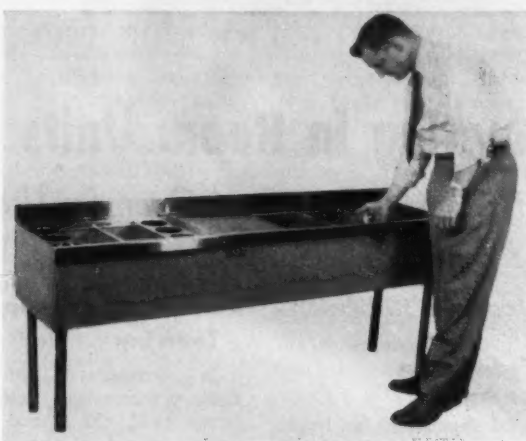
ATLANTA — Appointment of Dudley G. Singer as assistant to the export manager was announced recently by the Warren Co., Inc. here.

Singer has spent the past 14 years in the United States foreign service and for 12 years prior to that was an executive officer in charge of foreign sales for the Hobart Pharmacal Co.

Most recently commercial attache to the American embassy in Tokyo, Singer had previously served in the same capacity in Lima, Peru; La Paz, Bolivia; Buenos Aires, Argentina; Mexico City; and Bogota, Colombia.

Early in June, the company said, Singer went on an extended business trip to Japan, Hongkong, and Manila, and just recently returned to the export office which is in Los Angeles.

## Restaurant & Bar Equipment



La Crosse 'Add-A-Unit' drainboard.

## With La Crosse 'Add-A-Unit' Drainboard 14 Combinations Can Be Sold from 4 Units

LA CROSSE, Wis. — With its new "Add-A-Unit" drainboard, 14 combinations can be sold from an inventory of only four standard units, the La Crosse Cooler Co. announced recently.

Of all steel construction with specially treated, heavy gauge "Armco" zincgrip-paintgrip metal, the units are available in stainless steel polished finish with aluminum

pipe legs and leveling screw jacks.

With the 24-in. six-hole cocktail section and the 24-in. insulated ice chest available either as individual units or attachments and a 5-ft. and 6-ft. center tank drainboard, 14 different combinations can be made, the company explained.

Purchaser has his choice of 18-in. depth or 22-in. depth with 4 or 6-in. backsplash.

## Johns Sales Associates Moves to New Location

NEWARK, N. J.—Johns Sales Associates, manufacturers sales agents specializing in commercial refrigerator and food service equipment, has moved its office and warehouse stock to the Federal Storage Warehouse building at 155 Washington St., Newark.

The new quarters will make for an efficient arrangement, say officials of the firm, because the offices will now be located in the same building as the warehouse stock.

Johns Sales Associates are sales agents in all of New Jersey and New York state for Jordon Refrigerator Co., Stainless Food Equipment, Supreme Metal Fabricators, Inc., B. Brody Seating Co., and Wells Mfg. Co.

T. W. Binder and Harold Binder are the principals in the company and represent more than 50 years' combined experience in the refrigeration field. T. W. Binder will manage operations in the new office.

### Spicy Stuff

MEMPHIS — Three thousand square feet of air conditioned office space will be included in the new office and warehouse of McCormick & Co., world's largest spice and extract house, now under construction here.

## Buy Peerless FOR PERFORMANCE

Faster-Freeze  
Finned



Cube Makers

The PEERLESS Finned Faster-Freeze Cube Maker provides both refrigeration and rapid ice-cube manufacture from a single, balance, compact unit. Its fin coils are standard PEERLESS coils with nonsoldered return bends... the ice-cube maker is standard PEERLESS all-aluminum construction. Easy installation and trouble-free operation are outstanding features; these Finned Cube Makers are available with either copper or aluminum tubing, permitting choice of refrigerants. Plain type cube makers also available. Sizes, capacities for all requirements. Designed to meet government specifications. Write for details.

### Peerless of America, Inc.

1501 No. Magnolia Avenue  
Chicago 22, Illinois, U.S.A.

## Here's Harry Alter's DEPENDABOOK No. 161... 1954

### REFRIGERATION PARTS and Supplies plus

Electric-Motor Parts, Air Conditioning and Heating

There are over 9,000 items illustrated, described and rock-bottom-priced in our newest DEPENDABOOK. So—get and use this money-saver! Write for your copy to

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"Harry Alter gives you snappy service."

## LARKIN IS THE LINE

Of commercial and industrial refrigeration and air conditioning equipment

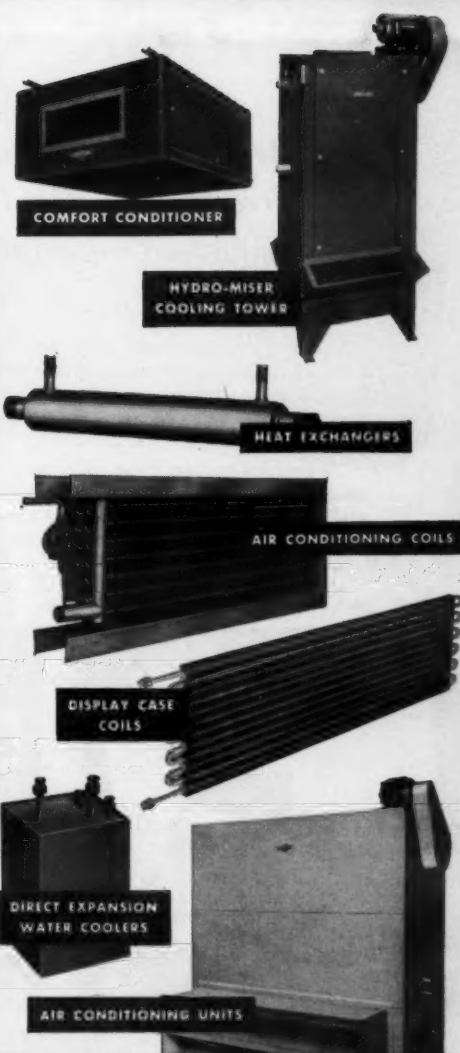
### HUMI-TEMP UNITS



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## AIR CONDITIONERS

### Reverse Cycle Heating In Room Units

Loveley, Chief Engineer of Airtemp, Sees Field Open for Use  
In Room Air Conditioners of 1 Hp. or Under

SEATTLE—"There is a field open to reverse cycle heating in the 1-hp. and under sizes [of room units] that we feel has considerable merit.

"It is the heating requirement that exists in temperate climates in the spring and fall before or after the central system has been turned off, especially in apartments or in warm climates such as the Gulf states, where outside temperatures rarely drop below 40° F."

#### Theme of Analysis

That was the main theme of a brief analysis of reverse cycle heating as compared with resistance heating which was prepared by J. D. Loveley, chief engineer of Airtemp Div., Chrysler Corp., and presented by James E. Blythe of Airtemp at the Room Air Conditioner Conference held during the 41st semiannual meeting of the

American Society of Refrigerating Engineers here.

#### Reverse Cycle Began 10 Years Ago

"Almost 10 years ago we began an engineering development program of reverse cycle heating and we still have some installations operating in the field," Loveley revealed.

"We have currently given up any development programs on sizes above 1 hp. and are now confining our activities to ¾ and 1-hp. room air conditioners. The reason for giving up our reverse cycle engineering program on larger size units is that we have found that satisfactory heating can be provided at a lower original cost of equipment and the same or lower cost of operation with oil or gas as a fuel rather than electric power in most areas of this country," he said.

#### Room Heaters Cheaper Than Larger Units

In temperate zone applications the reverse cycle room unit "may heat the same area as it cools, providing the outside temperature does not drop below 40° F. If supplementary resistance heating is required, many have found that it is much more satisfactory to purchase a small air-circulating resistance heater which can be moved about the room or rooms and located for the maximum comfort of the occupants," Loveley declared.

"To quote a prominent manufacturer's advertisement of last year: 'If you want a handy room heater, your dealer will sell you one for much less than the premium you'd pay for a "heat, too" room air conditioner!'"

"From the standpoint of the utilities," Loveley continued, "re-

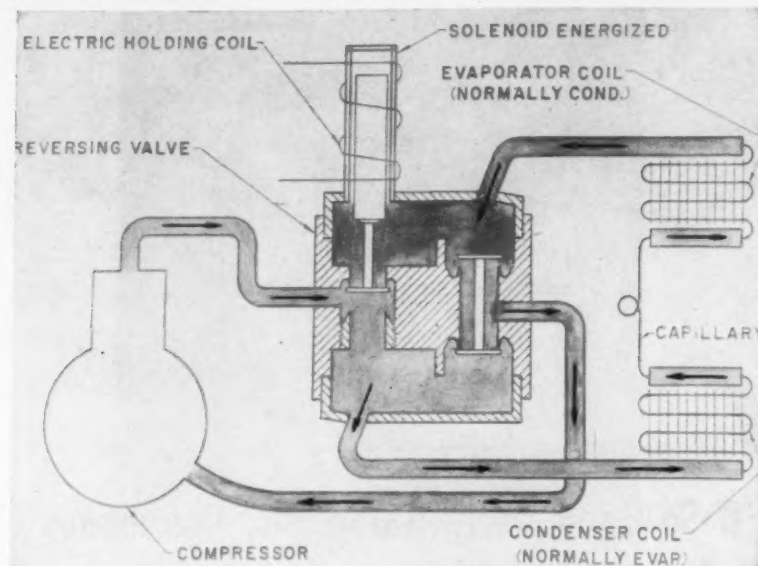


FIG. 1 shows diagrammatically refrigerant flow through Airtemp reverse cycle room unit during cooling cycle.

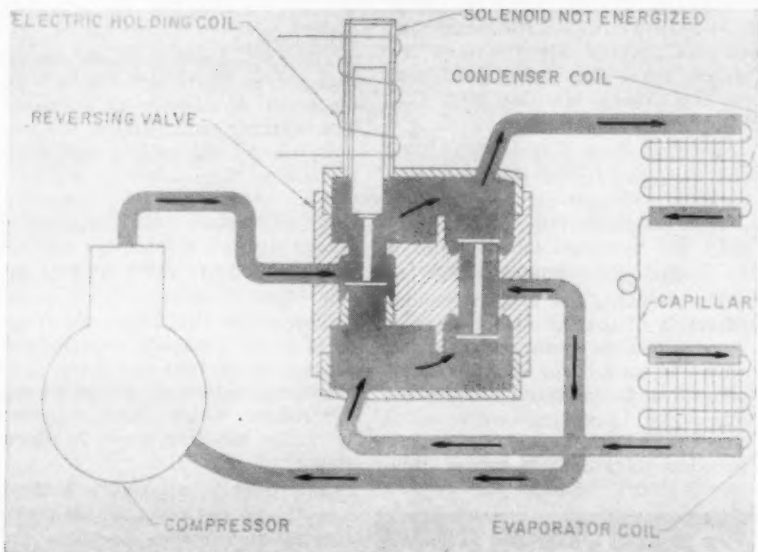


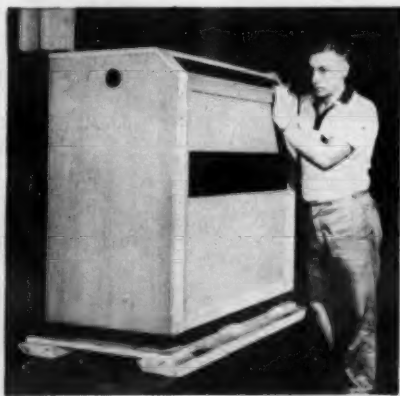
FIG. 2 diagrams refrigerant flow through Airtemp room unit during heating cycle.

# "We keep our new look—new—

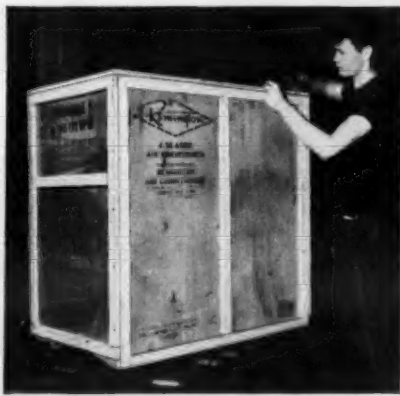
from Bombay to Birmingham,"  
says Fred Stidfole, Vice Pres.,  
Remington Corporation

"After all the money and effort we put into the fine mechanism and appearance of a Remington Console air conditioner, we want it to reach the customer in the same condition it leaves our plant—perfect," Mr. Stidfole declared.

"We turned to Atlas Plywood to study the 'safe transit' problem of the unit as carefully as we studied its design and manufacture. The Remington conditioner never arrives travel-weary!"



It's a beauty, isn't it? A beauty that will stay unmarred from the time it leaves Remington's plant at Auburn, New York, until it reaches the user. Jolts, jars and bumps of travel can't injure either mechanism or cabinet, thanks to the way this console is packed for shipment. Remington is one of the great names in console air conditioning... ships all they make in—



Atlas Plywood cases... for safe transit. Remington travel-tested many shipping containers... picked the Atlas-engineered case over others that cost more to buy and to ship. The container cushions the product for complete protection—yet doesn't touch the conditioner itself at any point. "Perfect," says the Vice President. "Reasonable in cost," confirms his comptroller.

What about you? Do you risk wasted dollars due to product damage or increased shipping costs from unreliable containers? Send for free informative, illustrated 24-page booklet, "How Atlas Plywood Cuts Your Shipping Costs... Safely,"—or see your Atlas Plywood representative (Classified Telephone Directory). Learn about the remarkable testing laboratory where Atlas Plywood containers win their lab-tested label. Atlas Plywood Corporation, Dept. ACR-1, 1432 Statler Building, Boston 16, Massachusetts.

## Atlas Plywood

CORPORATION

FROM AMERICAN FOREST TO FINISHED PRODUCT  
PLYWOOD CONTAINERS • FLUSH DOORS • HARDWOOD PANELS



verse cycle room air conditioners are of interest. They tend to lengthen the yearly operating usefulness of the room air conditioner and therefore meet the natural desire of the utility to smooth out the fluctuating sales curve and realize more revenue from the generating equipment.

"Of course, many businesses have a similar fluctuating sales curve," he pointed out. "For example, the ice cream business peaks in the summer time at a level five times greater than the lowest level in the winter months.

"In our own business, which is seasonal, we have the problem of moving our personnel from one type of equipment to another as the year progresses. Even in the automobile business, there is limited production at the time the model changes.

"It is our frank opinion, however, that the sales of reverse cycle units, particularly in the larger sizes, will always be restricted because their high first cost keeps them out of the mass market," asserted Loveley.

#### Use Not Recommended When Temperatures Go Below 40°

"Even in room air conditioners we do not recommend the use of reverse cycle heating when the temperatures get below 40° F. While it may be of some assistance to the utilities, it is not likely to make a great change in their sales pattern."

Loveley's presentation included illustrations showing refrigerant flow in a reverse cycle unit under cooling and heat operations.

Fig. 1 diagrams the flow when the change-over valve is set, i.e., not energized, for cooling.

"The real value of reverse cycle comes in the automatic change-over valve being actuated by a thermostat," he emphasized. "The thermostat on the unit can be set for a comfort cooling temperature of, say, 76° F.; if it gets warmer in the room, the cooling comes on. However, if the temperature drops below 72° F., the change-over valve operates automatically to

give you heat. This is a real advance in giving the customer year-round air conditioning.

"The reverse cycle operation that makes it possible for a room air conditioner to provide a substantial amount of heat is accomplished by a solenoid-operated, four-way, change-over valve mounted in the refrigerant circuit.

"The valve is positioned so that the hot gas from the compressor passes directly to the evaporator coil which is inside the room on the air conditioner. At the same time, the line bringing gas back to the compressor is connected to the condenser coil which is outside the building.

#### Liquid 'Freon' Flows Back to Condenser

"Then the liquid 'Freon' that collects in the evaporator flows back to the condenser through the capillary. Thus, the cycle is reversed. The air passing through the evaporator now absorbs the heat of the hot gas, and we feel warm air coming out of the discharge grille," Loveley explained.

Fig. 2 shows diagrammatically refrigerant flow with the solenoid energized, thus positioning the change-over valve for the heating cycle.

"The amount of heat on a ¾-hp. reverse cycle unit is shown in Fig. 3. It is important to realize," he said, "that there is a difference between reverse cycle heating and resistance heating coils. The reverse cycle unit operation, as we recommend its use, gives more heat per watt than the resistance heater.

"At 50° F. a ¾-hp. unit produces 7,400 B.t.u./hr., a sizable amount of heat, while a resistance heater output is 4,600 B.t.u./hr. To calculate the heat produced by a heating coil, multiply the watts input by 3.41. That is the amount of heat produced in B.t.u./hr.

#### For Larger Rooms

"You can do a better job of heating larger rooms with reverse cycle, so we recommend our re-

(Concluded on next page)



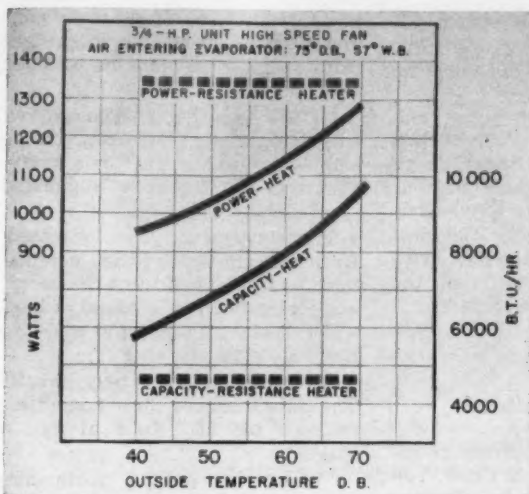


FIG. 3 compares resistance heater with reverse cycle room unit in terms of capacity and power input over outdoor temperature range of 40° to 70° F.

Table 1—Heat Output In Specific Room

Room—14 by 24 by 8 ft. (336 sq. ft.)			Slab on ground or with basement		
Uninsulated wall			1 sun wall		
Ordinary windows			Will cool to 75° with outside 95° d.b. and 75° w.b.		
Insulated ceiling					
Outside Temp.	Heat Loss (70° F. Inside)	Heating Capacity of Airtemp 3/4 hp. Watts	Using Strip Heaters With 300 c.f.m. Discharge Air Temp.	Watts	B.t.u.
60°	2860	1180	79°	840	2864
50°	5720	1120	88°	1680	5729
40°	8580	1060	97°	2520	8593
30°	11440	.....	105°	3360	11458
20°	14300	.....	114°	4200	14322
10°	17150	.....	123°	5040	17186

From the above it appears that the heat output of a 3/4-hp. Airtemp unit will equal the heat loss of this particular room when the outside temperature is 45° F. The unit should hold the room at 60° F. when the outside temperature drops to 40° F.

## Reverse Cycle Heating In Room Units--

(Concluded from preceding page) verse cycle heat for moderately warm climates," Loveley explained.

"It also has a value in cooler regions as an 'in-between' season heat source. In apartments or rental dwellings and motels, where central heat is only supplied in cold weather months, reverse cycle offers a lot of warmth.

"At the present time the reverse cycle operation has only one difficulty which we have not solved. During the heating cycle, the condenser is cold and moisture condenses on the condenser coil. The slinger on the condenser fan blows the condensate out through the condenser, and a small amount of water may drip from the coil to the ground below.

### Unusual Swishing Sound

"Because the condensate sump is usually filled with water during the heating cycle, an unusual swishing sound may be noticed. We have not had any complaints that it was objectionable," Loveley said.

"As you can see on Table 1, the heating capacity of the unit is

large enough to give enough heat to handle the area that the unit would normally cool. The resistance heating unit that is normally installed in the 3/4-hp. units on the market today is a 1,350-watt heating element which gives 4,600 B.t.u./hr."

Loveley's enthusiasm for reverse cycle room units was not shared by R. T. Smith, representing Tecumseh Products Co.

"We'd rather have strip heaters," Smith said. "Reverse cycle can mess up a compressor, especially as concerns lubrication and dissipation of heat."

### Costs Compared

It was also pointed out from the floor that the actual factory cost of installing a reverse cycle system amounted to \$10 while the factory cost for resistance heating was \$1.

Conference Chairman Herbert L. Laube, president of Remington Corp., commented: "Utilities will find that with reverse cycle, the unit will be turned off when the outdoor temperature falls to 40° F. whereas resistance heaters will stay on down through the heaviest load on the utility."

## Westinghouse Forms New Regional Sales District

ATLANTA—Otis O. Rae, vice president in charge of Westinghouse Electric Corp.'s southeastern region, has announced the formation of a new regional sales district, to be known as the central-southern district, with headquarters in Birmingham, Ala.

Manager of the new district will be J. M. Oliver of Birmingham.

At the same time Rae announced the appointment of R. F. Wright, formerly branch manager of the New Orleans office, as assistant to the vice president.

Wright will maintain his headquarters in New Orleans and will handle special assignments. J. H. Bennett will be New Orleans branch manager, succeeding Wright.

The newly-formed central-southern district will combine the areas previously included in the territories of the Birmingham and New Orleans branch offices, Rae said.

Oliver, the new district manager, comes to this position from that of branch manager of the Birmingham office.

### Admiral Dividend

CHICAGO—The board of directors of Admiral Corp. have declared a regular 25-cent dividend payable Sept. 30 to common stockholders of record Sept. 15, according to L. C. Park, treasurer.

## 'American Motel' Survey Shows 22% Of Motels Have No Mechanical Cooling

CHICAGO—Forty per cent of motel operators replying to a survey by *American Motel* magazine said their motels were equipped with either individual unit air conditioners or central plant air conditioning, a report on the survey indicated recently.

Of the 22% reporting motel operators who had no form of mechanical ventilation in their establishment, 45% said they planned to install air conditioning.

The answers to the four questions asked were submitted to the

magazine by 478 of its subscribers. Those replying, the magazine said, represented in about equal proportion large, medium, and small motels.

"While we do not profess the conditions reflected to be indicative of general motel conditions," the magazine said, "we do believe them to comprise a reasonably accurate reflection of conditions prevailing among *American Motel's* subscribers."

Results of the survey were as follows:

	Number of Replies	%
Do you have some form of mechanical ventilation—air conditioning, fans, window ventilators, etc.?	463	100%
Yes	361	78
No	102	22
If YES, what type?	356	*
Individual unit air conditioners	89	25
Central plant air conditioning	53	15
Window ventilators	107	30
Fans	117	33
Other	7	2
If you do not have mechanical ventilation of any type, do you plan to purchase any?	91	100%
Yes	73	80
No	18	20
If YES, what type?	65	100%
Individual unit air conditioners	23	35
Central plant air conditioning	7	10
Window ventilators	16	25
Fans	16	25
Other	3	5

\*Over 100% due to many answers where more than one type was checked.

is old stuff in refrigeration thanks to

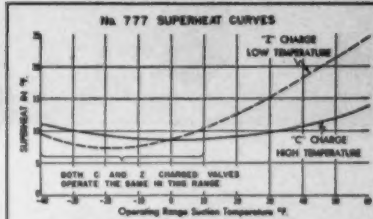
# Detroit Double Duty Valves!

Here are three D's to keep in mind whenever you buy expansion valves—**Detroit Double Duty Valves!** Yes, Detroit expansion valves give you double-duty or dual purpose performance because they're designed for either high or low temperature applications. Take a look at the illustrated superheat curves of Detroit 777 and 673 expansion valves and note that both high and low temperature valves give the same excellent performance in the low temperature range. This can be a real time saver to you in an emergency. Specify **Detroit Double Duty Expansion Valves!**

NOTE: High temperature valve used for low temperature work may require that the suction line be throttled during pull-down.

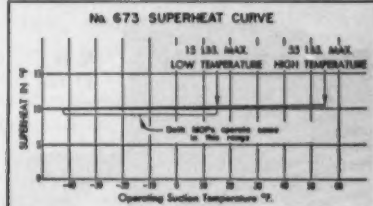
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- Accessible and easy superheat adjustment.
- Available with or without external equalizer.



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Write for Catalog Page 707-11

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## INSIDE DOPE

Learn to live and laugh—  
Thus delay your epitaph

By **GEORGE F. TAUBENECK**

(Concluded from Page 1, Col. 1)  
en route from Florida to the nation's Capitol.

Pitcher with the most apt name in baseball history, Early Wynn, toiled for the Senators in 1946. Midway in the third inning of an exhibition in Birmingham, Ala., hurler Wynn grabbed the seat of his pants, and bucked astoundingly. Seems that a kid in the crowd had stung Wynn's britches with a B-B gun.

Furthermore, he did it again and again. Early Wynn retired early. The kid never was caught.

Women are like umpires—they make quick decisions, never reverse them, and they don't think you're safe when you're out.

### Cleveland Clefts

Nasty-letter-writer Mrs. Clay Dunger pee-essed a wrathful letter to Hank Greenberg, the Indians General Manager:

"And if you don't pull out your wild pitchers faster I'll stop watching the Indians on television."

Bossman "Hank" Greenberg refrained (or possibly was restrained forcibly) from answering:

"If you're so concerned about the Cleveland baseball club why don't you buy a ticket and see a game yourself?"

Ever wonder how the "seventh-inning stretch" originated?

According to historians, President William Howard Taft threw out the first ball on Opening Day, and settled back to enjoy the game. Turned out to be a pitchers' battle.

Somewhat bored at the inaction along the base paths, the President arose between halves of the seventh inning. He yawned, "stretched," and loosened chair-born kinky muscles.

The crowd, bored also, watched President Taft unlimber. Assuming that he was leaving Griffith Stadium, they arose respectfully. He didn't depart; but they enjoyed "the stretch."

From the Washington baseball park the custom spread until it became an integral tradition of our National Game.

### Lagniappe

"Nothing cooks your goose quicker than a boiling temper," aphorized Eddie Stanky, manager of the St. Louis Cardinals.

He ought to know.

"I never played baseball myself when I was a boy because I

couldn't see. They always made me an umpire for that reason."—HARRY S. TRUMAN.

Quoth Chicago Cubs owner Phil Wrigley:

"Organized baseball is too much of a business to be a sport, and too much of a sport to be a business."

### Off-Beat Baseball Addenda

Years ago Bull Durham tobacco ads "graced" nearly all the outfield fences of major and minor league baseball parks.

Relief pitchers worked out near those huge paintings of a sturdy bull. And that's why the term "Bull Pen" has survived as the place where warm-up pitchers warm.

Embarrassment was rampant when owner Emil Fuchs of the Boston Braves rolled into a night club. First thing he saw was a table loaded with his players—and they were loaded, too.

They relaxed when, after glaring for a moment, he diplomatted:

"We shouldn't be seen together in a drinking place. But, er, I happen to like this establishment...."

His roistering boys got the hell out of there fast, and thankfully.

Lumbering Lou Gehrig and fleet "Dixie" Walker slid for the plate one behind the other. Catcher Luke Sewell tagged both out in a sweeping right-to-left gesture for

the most unique double play of all time.

It happened in 1937: Yankees vs. Senators.

Almost incredible oddity: Nick Altrock, pitching for the Chicago White Sox, won a game without making a single toss to any batter. Bases were loaded in the first half of the ninth. Score tied. Two out. Altrock came in from the bull pen. Promptly he picked off a forgetful baserunner.

Last half of the ninth Chicago tallied.

Winning pitcher: Altrock.

Hall-of-Famer Maranville roomed with Indian pitcher Chief Yellowhorse while with the Pirates. Bill McKechnie, then manager of the Bucs, busted into their hotel room.

Maranville was in bed. Pigeons were flying around the room.

"Where's Yellowhorse?" queried McKechnie.

"He's out the window getting his quota of pigeons. I've already got mine," happied Maranville.

Exceptionally durable was catcher Birdie Tebbetts.

Detroit pooh-bahs figured he was all through when they dealt him off the bottom of the deck to Boston. Not only did he perform stirringly in Fenway Park. The Cleveland organization got plenty of mileage out of him even later.

In the latter city 84-year-old Cy Young (a Hall-of-Fame immortal) was introduced to Indian personnel. When he came to Tebbetts the old-timer, who had pitched last in 1911, said:

"I've seen you before."

Wisecracked Dale Mitchell:

"How did you pitch to him, Mr. Young?"

### Better Off Not Knowing

Even worse at remembering names and faces than Jim Dykes and Babe Ruth was Reb Russell, a White Sox pitcher.

In a relief job for the Pale Hose he struck out the original Murderers Row—Cobb, Crawford, and Veech of the Tigers—with the bases loaded.

"Nice pitching," he was congratulated in the dugout.

"Yeah. Who were those fellas?"

There was a dead silence. Then:

"You'll be better off if you never learn who they are."

### Add Ruth Stories

The Yanks were in town for a three-game series.

Pitcher for the home club, scheduled to face the Babe in contest No. 2, bethunk himself of a clever

idea. With help from their convivial first baseman he might get Ruth so plastered that he couldn't see the ball.

So the smart pitcher conspired with his jovial first-sacker. "If he singles, invite him out for a party. I'll stand half the bills," suggested the fearful tosser.

The invitation was accepted. Ruth accompanied the nominal host, plus relays of in-on-the-secret home club fans, on a round of bars which lasted all night and well into the following morning.

How did the strategy work? The Babe smacked three home runs and, on his fifth time at bat, a single.

"Wonderful party," Ruth sinnered to the first baseman after the single. "Let's do it again tonight."

### Those Yankees Again

In a heyday of Murderers Row a familiar pattern unfolded.

Koenig tripled, Lazzeri doubled, Ruth homered, and so did Gehrig.

Dugan beat out a bunt. Combs sent him home with his second triple of the day.

"Whassa matta, Dugan?" rasped Manager Miller Huggins, when Joe came back to the dugout. "You almost spoiled our rally."

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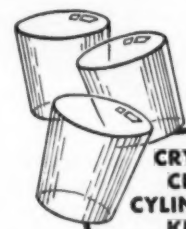
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TYPICAL CONTINUOUS installation of new Tyler Multiple-Shelf Open Dairy Sales-Cases in a modern supermarket. Special locking device draws cases together and prevents sagging.

## Tyler Multiple-Shelf Open Dairy Case Restyled for Greater Display Capacity

NILES, Mich.—A completely restyled multiple-shelf open dairy sales case, featuring greater wide-open accessibility and large display capacity in limited floor space, has been introduced by Tyler Refrigeration Corp. here.

Bottom display compartment—available with or without front glass—has been raised and widened to permit the shopper to see more merchandise, and reach it easier and faster, the company said.

Top display compartment is inset sufficiently to provide plenty of room for shopping both levels of the case. Both refrigerated display areas are at convenient shopping height—with bottom of lower shelf up 15 in. from the floor.

Twelve-foot models offer 36.5-cu. ft. refrigerated display capacity in a space only 12 ft. 6½ in. long by 3 ft. 7½ in. deep. Eight-foot models have 24.5 cu. ft. for display. Display areas are a full 8 or 12 ft. long, with 3¼ in. added for each case end.

Developed primarily for dairy products, table-ready meats, and all types of beverages, the new multiple-shelf sales case also is available for the merchandising of fresh meats, when specified.

Models for meat application are equipped with plated wire display shelves, adjustable to three positions. Case temperatures may be set from 32° F. for fresh meats, to higher temperatures for table-ready meats and dairy products. Tyler's high level refrigeration circulates cold air uniformly

throughout the entire display area on both levels.

Outstanding features include: one-piece welded-steel shell; Tyler automatic defrost system covering evaporator and all air passages; drainage system with large brass drain and odor-eliminating drainage trap; easy access to all drainage, electrical, and refrigerant outlets; protective cart bumper rail; and porcelain front with stainless steel trim.

Sales cases are available for single unit or continuous installation; for front or rear loading of top compartment. Superstructures, with either fixed mirrors or sliding glass doors, are furnished as separate accessories and may be added later if not originally specified. As with all Tyler cases, the equipment has Underwriters' Approval.

### Modern Supermarket In Havana, Cuba Gets Warren Equipment

HAVANA, Cuba—What is said to be the most modern supermarket in Havana, owned by the Minimax Chain Stores, Minimax Store No. 6 was recently opened in Tarara, one of the best residential districts in the center of the principal beaches of Havana.

The Warren Co. furnished a complete line of open type vegetable cases, freezer cases, double-deckers for dairy display, open meat cases for packaged meats, as well as display cases for meat, poultry, and fish.

The entire lay-out of the supermarket was designed by Ing. Raul Sotolongo, sales manager of the Refrigeration Dept. of the Compania Electric de Cuba, Warren distributor for Cuba.

## Commercial Refrigeration

To Preserve Eye-Appeal!

### Los Angeles Market Refrigerates Meat From Time It Comes Off Packer's Truck

LOS ANGELES—Because he has definitely proven to himself that meat which is never exposed to normal room temperatures will retain its maximum eye-appeal longer, with complete elimination of shrinkage, Winston Shaefer, president of Pioneer Market Corp. here, has built a meat department which employs "the absolute maximum" in refrigeration protection.

The big California supermarket sells an average of 40 sides of beef per week, 1,500 lbs. of pork, 40 lambs, and 60 lamb forequarters, along with poultry and seafood in commensurate amounts.

These sales figures have all been accomplished since the meat department was completely remodeled to provide refrigeration for all meats from the moment they are received from the trucks.

The No. 1 step was the installation of 50 ft. of Tyler's new "Cold Packaging" cases, which mean that all meats, as they are sorted,

packaged, sealed, and stacked in trays, are kept at 35° or less—even though the self-service packaging area and refrigerated cases are "out in the open" where shoppers can talk across the cases to butchers.

"These refrigerated pre-packaging facilities have meant a lot to us," Shaefer indicated. "They offer a practical means of retaining the personal element between customer and butcher, while still eliminating the glass window separation."

The 50 ft. of pre-packaging cases are matched by another 50 ft. of Tyler open "dividerless" self-serve display cases.

Going still farther, Shaefer has even eliminated one of the time-honored steps in meat processing, "grinding hamburger while the customer watches."

In order to keep the meat at full bloom, to prevent shrinkage or even possible spoilage, the hamburger grinders, including a ½-hp.

unit back of the self-service cases, and a 3-hp. unit within the meat department's walk-in, are likewise held at low temperatures.

The small "front grinder" mounted in the bottom of one of the refrigerated pre-packaging cases, is necessarily out of sight, but the fact that no meats placed in it have an opportunity to become affected by warmer temperatures more than compensates for the "concealment."

Signs along the supermarket's backbar point out that the pre-packaging case is kept at the same temperature or lower than that of the self-service case, and butchers likewise point out the fact when waiting on customers.

### Lowe Gets Same Post In Canada He Had In England

SASKATOON, Sask., Can.—W. A. Lowe has announced his recent appointment as manager of the commercial refrigeration department of the local branch of J. H. Ashdown Hardware Co., Frigidaire distributor.

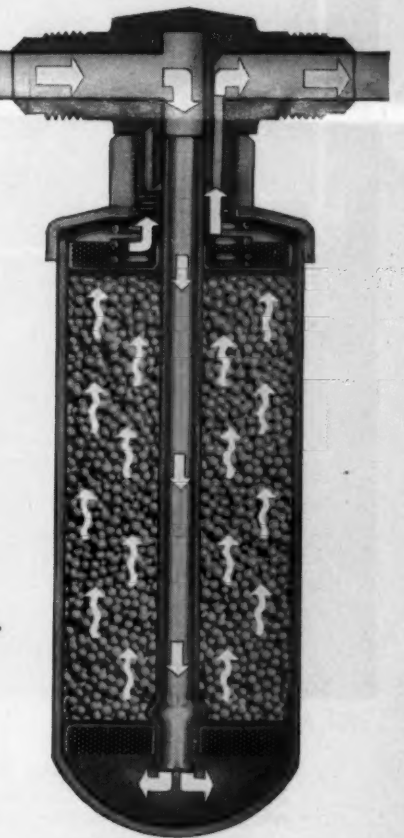
Lowe said that he arrived in Canada from England last April. He held a similar position for a Frigidaire distributor in England for 10 years. He said he has been connected with Frigidaire commercial refrigeration in England for 15 years.

He succeeds Blake McLean, who joined Refrigerative Supply Ltd. in Calgary, Alta.

# stop

# acid here

ACID causes  
refrigeration system  
breakdown!



NEW T-FLO DESIGN  
"SCREWS IN LIKE  
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Activated alumina in pellet form makes Ansul's new Andrite the double-duty desiccant. Its thousands of fast drying surfaces dry deeper—pulling moisture content way down. But even more important, Andrite removes acid, cleans up the chemical condition that causes sludge and corrosion—the major cause of refrigeration system breakdowns.

Designed for the revolutionary Ansul T-Flo Drier, Andrite won't break down or dissolve to plug filters or damage compressors. And the drier is easy to install, too. Even replacement

of the drier cartridge saves time, because it screws in like a light bulb. And no tools are needed. For fewer call-backs, speedier servicing, change to Ansul. And be sure to give new equipment double protection in acid and moisture removal. Use Ansul T-Flo Driers with Andrite.

For more information or answers to your refrigeration problems write to: Ansul Chemical Company, Refrigeration Division, Dept. D-3, Marinette, Wisconsin.

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## Mr. Dealer Subscriber: Repeat Sales are Profitable

After a brand new refrigerator or freezer or room cooler is sold, too many dealers abandon this "hot" prospect, we hear.

Further sales to the same customer might be easier to get than "initials" from still-to-be-signed "fresh leads."

Quite a few dealer salesmen fail to exploit to the hilt the sold family's complete home appliance needs, both current and potential, of each customer with whom they do business.

**Why settle for only ONE sale** to a needfully pliant prospect? Good advice: Try to provide two or even three new products to the same customer. Most of them probably could use advantageously another labor-saving appliance in addition to the one they recently bought from you.

As soon as a primary sale has been made, an on-the-ball salesman immediately should explore the possibilities of selling companion products to in-the-mood families. And, if quick results are not forthcoming, he should enlist these users and their neighbors as future prospects for other devices he sells.

Truly, there's nothing new or unusual about this practice of Using the User. All experienced dealers and professional salesmen concede that it is a highly profitable idea. Let us consider a few hypothetical cases.

**Suppose you have just sold a new refrigerator** to Mrs. X. She glances over the ranges, automatic washers, and other appliances in your showroom. She pauses at a vacuum cleaner. Suddenly she remembers that her old one should be replaced. Are you ready for Mrs. Freddy?

A demonstration might impress her. Although she might want it right away, possibly she cannot persuade her penny-pinching husband to purchase it now. However, chances are that

They'll Do It Every Time . . . . Jimmy Hatlo



she will buy the cleaner from you if you remember to call on her when her husband is home and well-dinnered.

**Next case:** Young Mrs. Z signs an order for a new freezer. But she wants delivery deferred for 60 days, "because our house isn't completed yet." Their ranch home needs almost everything else, including drapes.

Truly Mrs. Z provides a grand opportunity for at least two or three additional labor-saving appliance sales, and perhaps several more in the future if the dealer and salesman play this prospect imaginatively.

Mr. Appliance Dealer and Salesman:

**You can boost your earnings** by initiative and effort; by periodic call-backs; by using the user, and by following up leads provided by neighbors and friends of your users (whose names they will usually give you willingly, especially if you have given them adequate after-sales attention and service).

You have a grand opportunity to make real good commissions IF you will sell more to those whom you've already sold.

Can we not see that if we insist on government being strong enough to give us everything we want, we make it at the same time strong enough to take from us everything we have?—REV. KENNETH W. SOLLITT.

Ceremony makes fools more foolish; but fools dote on ceremony.—BENJAMIN FRANKLIN.

Life is like any other trip. Half of the fun depends on the traveling companions.—Review.



## OFF THE CHEST

Stuart C. Irby Co.  
Jackson, Miss.

Editor:

I was interested in the editorial "Cause for Alarm."

I am sure that it was through your not knowing the situation in respect to the REA Cooperatives that you have grouped them with other government financed projects and have advocated a shutting off of their funds because of the fact that "The REA Program is more than 95% completed."

It is true that 95% of the farmers have electric service. It is also true that because of the rapid growth of the use of electricity, the lines serving these farmers are inadequate in size, and it is necessary that they continue to borrow money to make the lines heavier, either by installation of three phase where single phase is now serving or by larger conductor.

Those of us who have been in the utility business know that the construction of an electric utility outside plant is a continuous thing. The private utilities are continually borrowing money as their revenues are inadequate to keep up with the rapid growth of the demand for heavier lines and equipment.

There are almost a half a million rural customers who are served by the Cooperatives who have borrowed from REA. Their record of repayment has been excellent and their management is in the hands of rugged individualists who have been successful in operating farms and who are not in danger of being

regimented by the REA or any government bureau.

If you had listened to the various speakers at the conventions of the Cooperatives, you would realize this.

I am asking the Association of REA Cooperatives to send you data on the record of the Cooperatives in repayment of their loans.

I agree with you that some of the public power projects should be eliminated. It is in grouping the REA Cooperatives with these others that you are doing the electrical refrigeration industry, which you have so splendidly served, a disservice.

STUART C. IRBY

Am Krenth, Germany

Editor:

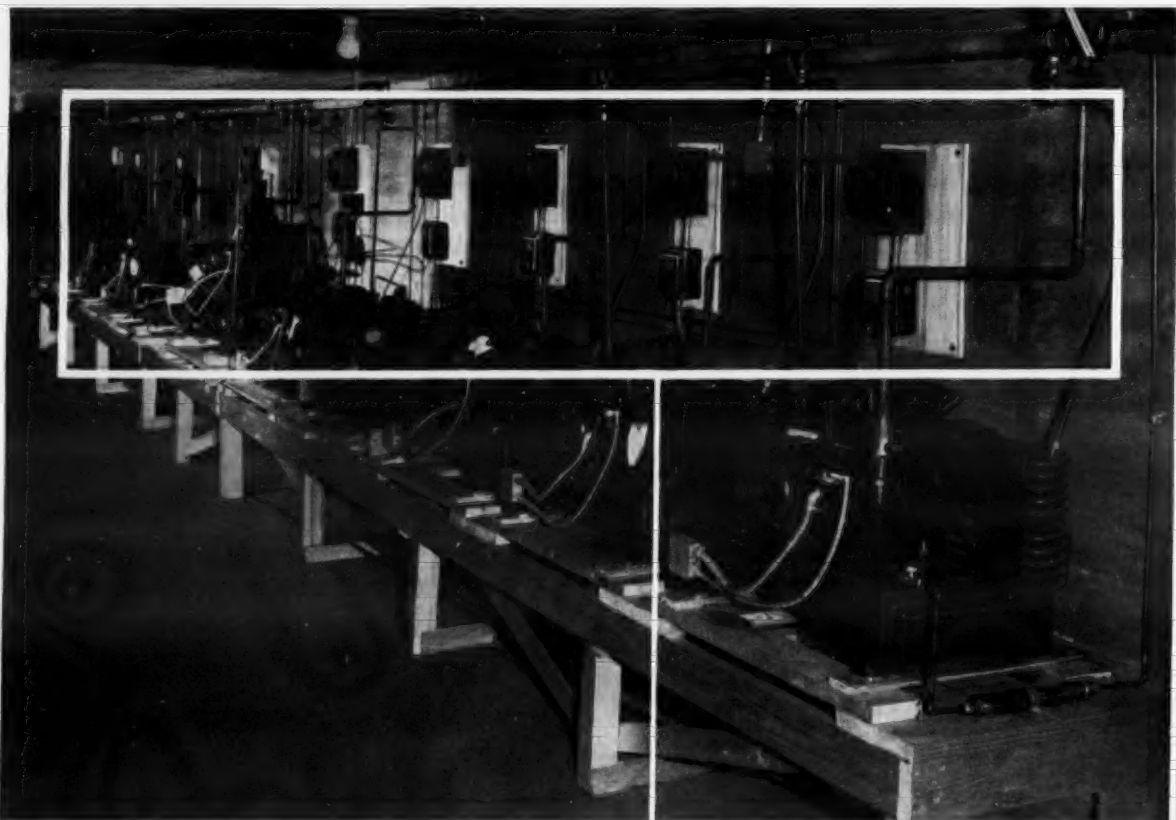
I am reading the NEWS now for about 3 years. I thank you very much for all your fine and helpful articles and other publications.

May I further take the opportunity and ask you a favour of another kind. Do you know a person or a firm which would give me a situation and help to emigrate to the United States or Canada? I am 37 years of age, married (3 children). I have the best practical and theoretical knowledge and experience on German and American refrigeration material.

We (my family and I) would thank you heartily if you would give us your unselfish help in this matter, too.

HORST SKOPNIK

## Curtis Compressors...



Row of Curtis Compressors, equipped with Allen-Bradley Bulletin 709 Solenoid Starters.

Compressors are important pieces of equipment . . . vital units, where they are a part of a food refrigeration installation. They must be reliable . . . and this refers especially to the motor control that is used. That is why Allen-Bradley Solenoid Controls are so popular for refrigeration and air-conditioning service.

Allen-Bradley Solenoid Starters do not require regular attention — they are trouble free. Only ONE moving part. No pivots, pins, or bearings to corrode or stick . . . no jumpers to break. You install them . . . and forget them!

No contact maintenance . . . Allen-Bradley double break, cadmium silver alloy contacts never need cleaning, filing, or dressing. Allen-Bradley thermal relays are dependable and remain accurate in their operation, even after many years of service.

The Allen-Bradley trademark stands for millions of trouble free operations. Install Allen-Bradley motor controls for reliable performance — they'll serve you perfectly no matter what the operating conditions may be!

Allen-Bradley Co.  
1313 S. First St., Milwaukee 4, Wis.  
In Canada—Allen-Bradley Canada Limited, Galt, Ont.

## Allen-Bradley Solenoid Motor Controls

QUALITY MOTOR CONTROLS FOR HEATING, VENTILATING, AIR CONDITIONING & REFRIGERATION INDUSTRIES

...operated by  
**ALLEN-BRADLEY**  
Trouble Free  
Motor Controls

TYPICAL ALLEN-BRADLEY  
REFRIGERATION CONTROLS



Special Refrigeration Control Panel



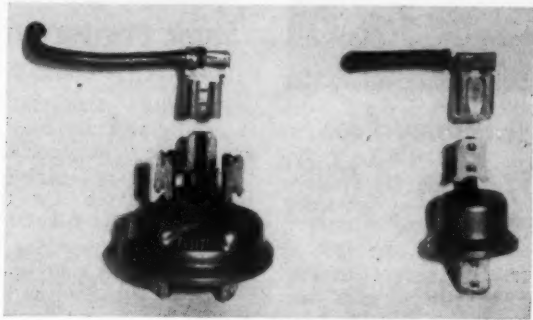
Temperature Control



Bulletin 712 Size 2 Combination Starter with Circuit Breaker, rated: 15 hp., 220 v.; 25 hp., 440-550 v.



## Service & Supplies

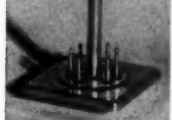


FUSITE hermetically-sealed electrical feed through terminal.

### Fusite Introduces Hermetically-Sealed Electrical Feed Through Terminals

CINCINNATI—A new series of hermetically-sealed electrical feed through terminals that reportedly

will increase production efficiency and can be used in higher horsepower ratings is now available from Fusite Corp. here.



Exhaust tube

At the same time, the company announced that a new exhaust tube for evacuation of atmospheres is now incorporated in its hermetically-sealed electrical feed through terminals.

Primarily designed for high production runs in the refrigeration industry, the new terminals may be used in 3/4-hp. 110-volt or 1 1/2-hp. 230-volt motors. This maximum operating range encompasses the majority of air conditioning units for home use.

"The higher horsepower ratings are accomplished through utilization of a more efficient type of mechanical slip connection," the company said. "This reduces heat rise at the pin connecting point. Plated tabs are permanently secured to the alloy pins by resistance welding. These tabs have been specifically designed to permit use of several of the popular tab type connectors."

These connectors are automatically machine applied to lead wires by motor and harness suppliers. Aircraft Marine Products

and Ark-Les Switch Corp. are sources for both connectors and application information.

The new terminals are made in both singles and three-pin clusters. Each has 350 p.s.i. operating pressure or 2,000 lbs. hydrostatic pressure. Maximum flash over is 2,500 volts RMS.

"The rugged terminals are designed to be resistance-welded into hermetic enclosures," Fusite said. "Glass-to-metal sealing provides an absolute hermetic terminal."

The new exhaust tube can be placed in any multiple cluster of terminals. It is spun into the center of the cluster for a tight mechanical lock and then solder sealed. The mechanical joint prevents the tube from falling out during subsequent soldering operations.

The tube is 1/8-in. i.d. With this larger bore, it is expected that atmospheres can be evacuated faster.

### Dr. Spilhaus Retained as Consultant for Honeywell

MINNEAPOLIS—Dr. Athelstan Spilhaus, dean of the Institute of Technology at the University of Minnesota, has been retained by Minneapolis-Honeywell Regulator Co. as a consultant in the fields of engineering and research.

W. J. McGoldrick, vice president of the company, said that Dr. Spilhaus, one of the nation's leading scientists, would assist in the formulation of broad engineering and research policies.

Noting that the company recently has expanded its research personnel and facilities, including the establishment of a new research center, McGoldrick said Honeywell was intensifying its development not only in such well-known fields as electronics, but also in newer ones such as transistor development and sonar and nuclear energy.

### New Silver Solder Flux Made for Unusual Tasks

CLEVELAND—A new silver solder flux has been developed for "out of the ordinary applications" by the Superior Flux & Mfg. Co. here.

Called the No. 601, it is intended to supplement Superior's patented No. 6 noncorrosive solder flux and No. 66.

This new compound possesses superior cleaning and protective qualities and increased capillary action, the company said. It eliminates flux inclusions and porosity, making clean, non-porous joints with great strength and ductibility, the manufacturer claims. Flux residues are easily removed by flushing with hot water, it is pointed out.

The manufacturer said that the No. 601 was the only flux which would do a perfect job on an Air Corps part which consisted of an 18-in. diameter stainless steel housing to which a large number of thin blades had to be attached.

Brazing with a torch was the only practical way of attaching those blades. Due to their thinness and the thickness of the housing, quite a bit of localized overheating was created in the blades.

All other fluxes tried burned up and disintegrated under the intense heat, the manufacturer declared.



### 2-Wheel Hand Truck Can Lift Quarter Ton

CHICAGO—Precision Equipment Co. here is offering the "Shop Caddy," a rugged two-wheel hand truck which embodies a hydraulic lift capable of raising loads of as much as a quarter ton.

The Shop Caddy is a tool for loading and unloading trucks, for stacking kegs and boxes, for moving dies, and for moving heavy units in assembly line production.

Its lifting platform, in the down position, is at floor level for easy loading. When loaded, a few strokes of the lever will raise the load to the proper height. A four-speed pump ram is furnished so that the lifting speed may be set according to the load.

The device has a lift capacity of 500 lbs. and a lifting height of 36 in. Its platform is 16 in. long by 20 in. wide. The over-all height is 50 in. and over-all width is 23 in. The roller bearing wheels are of 8-in. Moldon rubber.

### A. G. Butler Dies at 57, Was Head of Perfex Div.

MILWAUKEE—Allen G. Butler, vice president and general manager of Perfex Corp.'s controls division, died recently at Columbia hospital following a short illness. He was 57.

Butler had been associated with Perfex 19 years. At one time he was in charge of the firm's Chicago office. He came to Milwaukee 10 years ago. Survivors include his wife, Lillian; a son, 1st Lt. Allen W., who is stationed in the Marshall Islands; his mother; and a sister.

### Scurlock Named as Service Agency for Mueller Climatrol

MILWAUKEE—Mueller Climatrol, manufacturer of residential and commercial heating and air conditioning equipment, has appointed the Scurlock Heating and Air Conditioning Co. of Kansas City as the authorized service agency for Mueller Climatrol cooling equipment in the Kansas City area.

The Scurlock Heating and Air Conditioning Co., owned by William Scurlock, is one of the first such agencies to be named by the Mueller firm which is forming a national network of agencies intended to insure better customer service.

# 100% ACID REMOVAL

plus complete moisture adsorption makes TRAP-DRI your BEST BUY

ELIMINATE corrosive acids (and moisture at the same time) and you end a major source of refrigeration trouble! Never before has such positive protection against corrosive acids in refrigeration systems been available! Water and acid are adsorbed physically — no release of any substance to refrigerant circuit. With amazing PA 400 silica gel, Trap-Dri adds years of profitable trouble-free performance . . . greater guarantee of safety to any refrigeration installation. HERE'S PROOF!



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For Export: 13 E. 40th St., New York, N. Y., U.S.A.

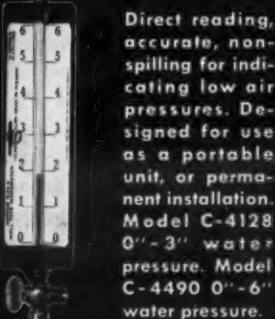
OUR THANKS to thousands of servicemen who tried New Trap-Dri — as a result of our special introductory offer — and who found these plus features assured trouble-free service.

- REMOVES MORE MOISTURE — PA 400 adsorbs water and acid physically instead of chemically. Tests prove complete moisture adsorption at temperatures as high as 160° F. Prevents freeze-ups, corrosion and copper plating.
- EXCLUSIVE DEPTH FILTRATION — desiccant or dirt cannot get through because filter element is located at outlet end. Trap-dri has more filtering surface than any other drier on the market.
- NO APPRECIABLE PRESSURE DROP — less than 1 lb. at all times.
- WORKS ANYWHERE — under any condition. Trap-Dri shell and fittings will withstand over 2000 lbs. pressure.
- HERMETICALLY "FACTORY-SEALED" AGAINST MOISTURE.

Exclusive money-saver for you "TWIN" TRAP-DRI

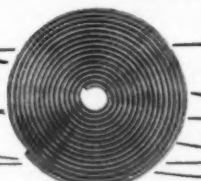
Two Trap-Dries factory-connected in parallel operate as a single unit. Provide same capacity as much larger units, eliminating heavy castings, larger fittings and bulky, hard-to-assemble units, and saves you money.

### MERIAM FILTER PRESSURE GAUGES



THE MERIAM INSTRUMENT CO.  
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Viking copper tube is annealed with precision uniformity insuring speedy, efficient, trouble-free fabrication and strength.



Triple-sealed Viking tube remains extremely dry and absolutely free of dirt. The seal is made to pass through any opening large enough for the tube itself.



Viking refrigeration tubing is soft and pliable—can be formed, flared and expanded quickly without danger of fracturing and spitting.



VIKING copper tube co.  
CLEVELAND 10, OHIO

PRECISION DRAWN SEAMLESS COPPER AND ALUMINUM TUBING



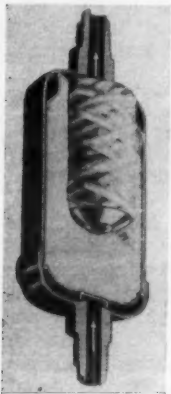
## What's New

When requesting further information on new products, please use "Information Center" form.

### 'Trap-Dri' Said To Adsorb More Moisture

KEY NO. D-930

MILWAUKEE—A new and improved filter and drier unit, called "Trap-Dri," which is claimed to have a higher adsorbing quality than others previously manufactured has been announced by the A-P Controls Corp. here.



The manufacturer says Trap-Dri adsorbs harmful acids, provides depth filtration, prevents chemical reaction in the system, and operates at no appreciable pressure drop.

It is also claimed to eliminate corrosion and dirt problems created in the refrigeration system.

Trap-Dri features a new refrigeration grade silica gel desiccant which protects refrigerating systems against the harmful moisture effects of freezings, corrosion, and



copper-plating in the refrigeration system.

The desiccant not only removes moisture which may form as the system operates, thus causing acids and corrosion, but also adsorbs acids which may be present in a system which is already in operation.

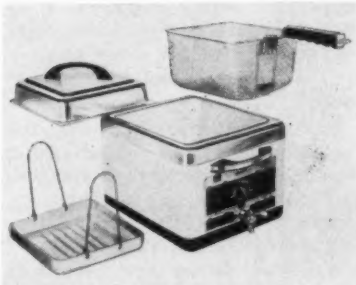
Also incorporated into the new A-P drier are double seal plastic caps which prevent any dirt or

moisture entering the drier preceding installation. Silver solder seal of the two-piece body shell assures leakproof joints, the company points out.

Large wrench-grip inlet and outlet fittings and a new special copper-paint finish which protects against external surface corrosion are other features. Flare-type or solder-type connections are available.

Trap-Dri will withstand more than 2,000 lbs. bursting pressure, the manufacturer states. Large models have been designed for refilling with silica gel.

In addition, a twin, or double Trap-Dri, is offered to provide a unit for 5-ton and 10-ton systems. Its "T-Fitting" construction provides the same capacity as a very large model drier, but eliminates the need for heavy castings, large fittings, and bulky, hard-to-assemble units, the manufacturer further stated.



### Cooker-Fryer-Roaster

Oven Has 6½ Qt. Capacity

KEY NO. D-931

TUCKAHOE, N. Y.—An "Alcamatic" deluxe table cooker-fryer-roaster oven has been introduced by the Eastern Metal Products Co. here.

The appliance includes a 6½-qt. capacity cooking well, large fry basket, roasting inset aluminum pan, and high-dome utility cover. A removable plastic handle attaches to the fry basket, which is made of closely woven, rustproof hot tin-dipped wire.

An automatic temperature control holds temperatures from 200 to 450° F. and includes a "simmer" range. A signal light indicates when to fry, cook, bake, or roast and goes off automatically when the proper temperature has been reached.

A fast-draw spigot removes contents easily for draining and cleaning.

A guide plate on the front of the cooking well gives time and temperature instructions for preparing a variety of foods.

The cooking well is of one-piece, die-cast aluminum and the sealed type heating element is also cast in aluminum so that no extraneous matter can get into the units. The electrical unit operates on a.c. only, 110-120 volts, and draws 1,500 watts.

Available either in white enamel or chrome finish, the unit rests on a heat resistant base and plastic knob feet. An oil level is marked on the inside of the cooking well to indicate the proper amount of oil or shortening to be used, it is pointed out.



"Trouble-free performance... makes satisfied customers for me," says Ernest W. Farr, Bell Refrig. Corp., Cleveland.

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• COMMERCIAL AIR CONDITIONERS, 25 TO 250 TONS  
• RESIDENTIAL YEAR-ROUND UNITS FOR GAS OR OIL  
• ROOM AIR CONDITIONERS, ½, ¾, 1, 1½, 2 TONS  
• PACKAGED HEAT PUMPS, RESIDENTIAL & COMMERCIAL



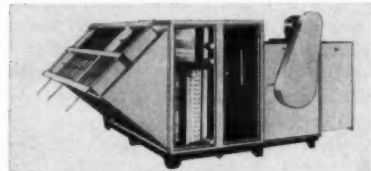
### 6-Ft. Wall Display Case Holds 832 Qts. of Milk

KEY NO. D-932

MOUNT VERNON, N. Y.—A wall dairy display case that will hold about 832 qts. of milk has been introduced by the Peerless Equipment Corp. here.

With additional shelving, the company said, the case will hold about 1,000 qts.

Measuring 6 ft. wide by 30 in. deep and 79 in. high, the self-contained case comes with stainless steel front and aluminum interior or white baked interior and exterior.



### Single Unit Cools Zones At Varying Temperatures

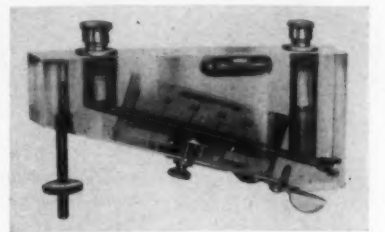
KEY NO. D-933

W. HARTFORD, Conn.—A series of "Multizone Units" for use where conditioning of separate rooms or zones of a single large room at different temperatures is required or desirable has been introduced by the Bush Mfg. Co. here.

The new central-station air-handling units make possible the individualized conditioning of such areas with a single unit instead of several units, the manufacturer said.

They are available in nine sizes covering a range from 1,800 to 21,600 c.f.m. Zone dividers can easily be changed in the field and discharge can be arranged as desired: vertical, horizontal, or both.

Entire interior is insulated and undercoated.



### Dwyer Gauge Measures Static Pressure Drop

KEY NO. D-934

CHICAGO—Designed to measure the static pressure drop across the evaporator to determine correct air flow, the Dwyer Gauge No. 172 has been announced by the F. W. Dwyer Mfg. Co. here.

The gauge provides a tool-kit size instrument that is quickly attached or detached, is breakproof, and permanently accurate, the manufacturer says. It measures 0 to 1 in. water pressure on a 3-in. scale calibrated in .02 in. divisions.

Most manufacturers specify the exact pressure drop (measured in inches of water) at which each evaporator of their make is designed to operate. Thus the Dwyer gauge can be attached and the blower speed adjusted until the pressure drop reading corresponds with the manufacturer's recommendation.

The gauge is also suitable to determine furnace draft, filter conditions, and plenum pressure.

ANOTHER **4H** "PLUS!"

**"HOT DIP"** Galvanizing

AFTER FABRICATION ON ALL

**PERMA-FAN** EVAPORATIVE CONDENSERS



Installation by Key Refrigeration, Los Angeles.

IT'S SERVICE-FREE PERFORMANCE with Perma-Fans—ever since D-H pioneered the blow-thru principle of operation, back in 1937! NOW, new and proven advances give you an expanded Perma-Fan line:

- In tonnage ratings from 5 to 105
- For indoor or outdoor installation
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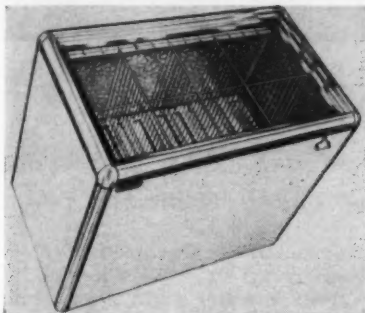
Sales Territories Available - For Further Details Contact

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## What's New (Con't)

### Bevco Dry Beverage Cooler Has Greater Capacity



KEY NO. D-935

ST. LOUIS—A dry beverage cooler that is claimed to have more storage capacity than any other cooler on the market is being produced by the Bevco Co., Inc. here.

The model C-15 "Combo" cooler has 10 cu. ft. of space for storage of milk and other dairy products. It has a corded capacity of 12 cases of 12-oz. bottles and 15 cases of 7-oz. bottles. The manufacturer says it will hold any glass, metal,

or paper containers up to gallon size.

Over-all dimensions of the cabinet are 47½ in. long, 27½ in. wide, and 38 in. high. Interior dimensions are 40½ in. long, 21½ in. wide, and 19½ in. deep.

The manufacturer notes that the copper refrigerant tubing is sweat-welded to the outside of the five walls of the interior liner, leaving the entire interior free for storage. A ¼-hp. sealed refrigeration unit powers the system. Temperature control is adjustable by the user to maintain proper temperatures.

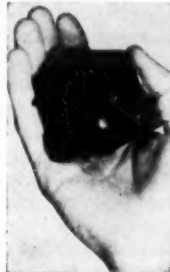
Other features include baked enamel exterior, stainless steel sliding lids and top rails, and Fiberglas and Temlock insulation. Standard replacement parts obtainable anywhere are used throughout. The compressor is covered by a 5-year warranty.

A grille divider assembly to provide for compartmental beverage storage is available at extra cost.

### G-E Introduces Smaller Motor Starting Relay

KEY NO. D-936

SCHENECTADY, N. Y.—A new motor starting relay, smaller, less expensive, and of a more advanced design, has been announced by the General Electric Co.'s Appliance Control Dept.



Designed specifically for starting single-phase capacitor-start, and capacitor-start capacitor-run fractional or integral-horsepower motors, the relay can be used to replace the centrifugal switch.

It is particularly applicable where adverse atmospheric condi-

tions exist or where it is desired to have remote control incorporated into an explosion-proof case, according to company engineers.

Most common application for the relay is in the starting of single-phase, hermetically-sealed, refrigerator compressor motors, they said.

Accurately calibrated at the factory to pick up at a predetermined voltage, the relay coil is wired across the starting winding of a single-phase motor. In operation, the relay picks up only when the motor comes up to speed, increasing the induced voltage in the starting windings.

The new relay, designated type ARR-1, is available in ratings up to 5 hp., 115/230 volts, according to the announcement.

### M-H Extends Range of Strip Chart Recorder

KEY NO. D-937

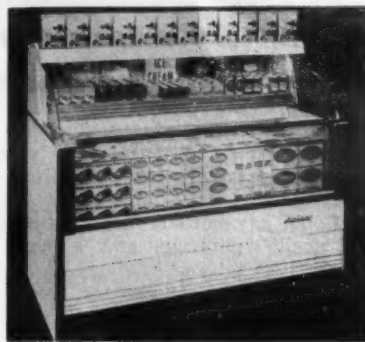
MINNEAPOLIS—A newly designed electronic strip chart recording instrument which couples a single scale with automatic range extension has been developed by the Minneapolis-Honeywell Regulator Co.'s Industrial Div.

The new recorder, an addition to the firm's line of "ElectroniK" instruments, extends the measuring range by five equal suppression steps. This increases the effective length of scale and measuring slidewire to some five times that of single-range instruments with the same total measuring span. It also increases the readability of the chart in proportion.

The new electronic recorder is available with pen speeds of 2 or 4½ seconds for full scale travel. The basic chart speeds are 6, 30, and 120 in. per hour. The minimum span is 2.2 millivolts. Four additional suppression steps of 2 millivolts each are automatically switched into or out of the measuring circuit to meet varying requirements. Thus, a total minimum range of 10.2 millivolts is provided.

The instrument improves the measurement of any linear condition where the values vary throughout a wide range yet still require precise measurement, the company said.

### Low Temperature Case Has New Air Flow System



KEY NO. D-938

KENDALLVILLE, Ind.—A self-contained, automatic defrost, low temperature ice cream and frozen food merchandiser that features an exclusive air flow that surrounds the product load with sub-zero air has been introduced by McCray Refrigerator Co., Inc. here.

A specially designed McCray coil, on which a patent is pending, provides quick, positive defrost, the company says. Hot gas defrost operates on one defrosting per day under normal conditions. Defrost water is automatically evaporated. No drain is necessary.

The brightly lighted case, called the LT-6M, has a 16½ in. deep four pane Thermopane front glass and "spacious" open top. The 1-hp. condensing unit, located in the lower front of the case, is accessible by removing the front panel.

The LT-6M is 69½ in. long, 32½ in. deep, and 42⅞ in. high.

The display capacity is 11.3 cu. ft. It holds 540 pints of ice cream or 600 packages of frozen food. The top packages are only 5½ in. below the 40 in. high stainless steel reach-in rail which has a heater wire underneath for shopper comfort.

A lighted superstructure 13 in. high is available as an extra. It has a removable picture panel with four highly colored pictures and reversible ice cream and frozen food sign which can be changed from front to back.

In the back position 5.4 sq. ft. is available for toppings or related item display. The superstructure top furnishes 6.7-sq. ft. additional display space. A 9 in. high back panel can be used in place of the superstructure. This panel has the same pictures and reversible sign.

The LT-6M is of all steel construction with highly polished stainless steel on the corners, ends, and top and bottom of the front glass to protect it from shopping cart damage.

The front panel and top of the case are white porcelain. Bumper and kick rail at the bottom are black porcelain. The back and ends are high gloss, high baked white enamel on bonderized steel.

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For more information on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

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#### Products Advertised

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**MOLDED  
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It is molded of minute particles of a highly efficient desiccant. Then, after complete assembly, it is activated to the highest degree of dryness... a minimum of four hours at over 500° F., then sealed against any loss of activation before installation!

It dries the refrigerant down to an extremely low end point... a point so low that any remaining moisture is absolutely harmless!

Its tremendous cylindrical, tri-dimensional, porous filtering area unquestionably offers the only true filtering device capable of filtering out foreign matter as minute as 9 microns with negligible pressure drop.



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So... if you want perfectly clean, perfectly dry refrigeration and air conditioning systems buy Sporlan Catch-Alls, the Perfect Filter-Drier!

Ask your wholesaler for the Sporlan Bulletin 40-10 today! You'll find Catch-Alls available in progressive sizes from 3 to 192 Cu. in. in flare or sweat connections.

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## Railroad Car Refrigeration

**Mechanical Refrigeration Proving Best for Meats and Frozen Foods; Produce Shippers Hold Back on Cost Basis**

SEATTLE—What are the prospects in the near future for mechanical refrigeration on railway "reefers?"

Good, say both a manufacturer of such equipment and a meat packer.

Not so good, except for frozen foods, says the operator of 39,000 refrigerator cars.

That sums up, as briefly as possible, three talks on the subject presented at one session of the 41st semiannual meeting of the ASRE here.

An over-all discussion of the problem with emphasis on the technical side of the question was presented by C. F. Henney and D. C. McCoy of Frigidaire Div., General Motors Corp., who summarized, in part:

"Technical difficulties incapable of solution are not in sight; however, some of the problems still to be solved may require considerable time and work."

Ralph W. Ransom of John Morrell & Co., meat packer who has been using 25 mechanical reefers and plans to supplement them, commented:

### SPEED VITAL TO PACKERS

"To put products with the original quality into the hands of the consumer, there is no substitute for speed. Mechanical refrigeration provides the best crutch to take care of the time used in getting the product to consumer."

But K. V. Plummer of Pacific Fruit Express Co., while conceding that the "transition" to mechanical systems for frozen food haulage "is already under way," declared:

"Until methods are developed that will produce mechanical refrigeration at much lower costs than we can see at the moment, I think ice will continue to be the cheapest and most dependable for fresh fruits and vegetables."

"It is not a question of whether we want to change our methods, but whether we can afford to do so, and after doing so, what advantage will accrue."

In their paper Henney and McCoy pointed out that 360 mechanical cars were in frozen food or general service as of Feb. 12, 1954, with an additional 301 cars on order. There were also on that date "not more than 50" in specialized applications such as milk tank cars and meat cars.

### BEST FOR FROZEN FOODS

"The controlled, steady low temperatures necessary for the proper handling of frozen foods by the railroads have not been obtained so far in refrigerator cars using water, ice, and salt. Dry ice and other means have been tried and proved expensive or unsatisfactory," they report.

"The present success of the mechanical car is indicated by the comments of citrus juice concentrate packers, typical of which was: 'Mechanical refrigerated rail cars are providing the best product protection of all types of equipment. Trucks run second, and the ice and salt reefers afford by far the poorest protection.'"

In discussing costs, Henney and McCoy said that "to compare realistically operating costs of mechanical cars with ice cars is difficult because of many intangibles. Fuel and oil costs vs. ice (or ice and salt when necessary) are favorable, but only tell part of the story. Maintenance, interest on the investment, depreciation, etc., on both the car itself and the mechanical equipment must also be considered. No accounting standards exist at present. . . ."

They cited such advantages for mechanical refrigeration systems as elimination of the "damaging and corrosive effects of salt and water ice" with a resultant increase in car life and reduction in damage

to rails, switches, bridges, etc.; more usable revenue-producing space, reduction in non-revenue weight handled, operating savings possible when full trains of mechanical cars can be used, fewer delays and more revenue hours because it takes about half as long to precool a mechanical car.

Using the title "Does the Mechanically Refrigerated Freight Car Do Its Job?" Ransom of Morrell said, "We have been very interested in better refrigeration for our cars for many years and have tried any number of ideas and methods, including modifications of water ice. None of them was the answer until the self-powered refrigeration units."

### EVEN 'MIXED' SHIPMENTS

He pointed out that the majority of Morrell's shipments are "mixed" cars containing products that should be kept in the low 30's along with items normally chilled only to 60° F. and canned goods.

"Low temperature air circulated in fairly large volume is necessary to counteract the effect of one product upon the other when intermingled in this manner. Mechanical equipment provides the necessary low temperature," declared Ransom.

The 25 mechanical cars now being used by Morrell, he explained, are equipped with self-contained Thermo-King units, which are of direct-drive gasoline engine design. These cars are actually leased from Mather Stock Car Co.

"We entered into an agreement in January, 1952, with the Thermo-King Railway Corp. whereby this company will provide refrigeration equipment complete, including its operation," Ransom said.

"The company is required to maintain the temperature in these 25 cars as demanded by us, for which we pay on an hourly basis. . . . Thermo-King maintains the equipment, including gas, oil, maintenance, replacement, etc.; our only responsibility is to keep Thermo-King advised of the movement of cars so they can be serviced."

### PACT WITH UNIT MAKER

The financial arrangement, he said, "calls for a payment on our part to Thermo-King of 60¢ per hour for the first 2,000 hours per year the refrigeration equipment is in use and 32¢ per hour for all time over 2,000 hours."

"The time is based on a recording clock attached to the mechanism which operates all the time the switch is turned on whether the equipment is required to maintain temperature or not. Thus you can see that on a five-day delivery, or 120 hours, we would pay Thermo-King \$72 for refrigeration at the higher rate."

Discussing Morrell's experience thus far, Ransom said that from the last part of March, 1953, until Jan. 9 this year 260 carloads had been shipped to Florida in mechanical cars.

"There were claims for spoilage of product in eight of these cars. There were only three in which temperature conditions indicated spoilage occurred in transit."

"Excluding the two cars which went through without refrigeration, the average claims for spoilage on mechanically refrigerated cars over this period of nine months was 30¢ per carload shipped, against 72¢ for iced cars. Actually, this money is an insignificant amount in either case."

Possibilities of wider use of mechanical systems for fruit and vegetables seem remote to Plummer of Pacific Fruit Express.

"Will the railroads adopt mechanical refrigeration? For frozen foods—yes," he says. "For fresh fruits and vegetables? Well, that is a moot question. My answer is, 'not in the foreseeable future.'"



## Freeze Treating of Steel

**Conrad Describes 'How' and 'Why' of Cooling In Tempering Process and Its Ultimate Value**

HOLLAND, Mich.—What happens when industrial cooling is used to harden steel was described recently by Charles Conrad, president of Conrad, Inc. here.

Conrad manufactures industrial coolers specially designed for the freeze treating of metals down to -120° F. so that relatively soft elements in steel are transformed to hard, strong constituents.

This gives a positive "set" to the steel, especially in tools, gages, and dies, so that it does not change in structure over a period of time, he explained. This greater stability of the steel, and greater hardness, increases the life of these products, reducing costs, and increasing efficiency.

His description of the chilling process is as follows:

"When steel is heated to its hardening temperature, the structure consists of a solid solution of carbon in iron, known as austenite. Austenite is relatively soft, tough, and ductile, even at room temperature."

"When hardening such steel by cooling in some suitable medium, the austenite transforms to martensite, a hard and strong constituent that is an aggregate of finely dispersed carbides in iron."

"In many steels, the transformation of the soft high-temperature austenite to the hard martensite does not always go to completion. After the steel has been cooled to room temperature, some austenite has still been retained. Cooling must be sufficiently rapid to prevent transformation at high temperature to a relatively soft product, pearlite."

"Generally, the higher the carbon and alloy content and the higher the hardening temperature, the greater will be the tendency to retain austenite. Thus, it is apparent that mixed structures of this nature may be present frequently in 'as quenched' steel."

"Retained austenite can be made to transform in a number of ways. In a few steels, in which the amounts of retained austenite are relatively small, a sufficient length of time (sometimes months or years) at room temperature will

change all or nearly all of it to martensite. This explains the inability of many gages to maintain shape and size accurately over a long period of time."

"In all steels, the austenite can be transformed by tempering, but frequently such high temperatures are required as to lose hardness of the martensite and cause transformation of the austenite to a softer bainite."

"This purpose may be accomplished by simply continuing cooling of the steel to considerably below room temperature. This treatment reduces the stability of the retained austenite—reduces its reluctance to transform."

"In many plain carbon and low alloy steels, either medium or high carbon (including carburized), one such cooling to a temperature of -120° F. in a Conrad cooler is sufficient to virtually complete all transformation."

"In other steels, particularly the highly alloyed die steels, several such operations may be necessary with intermediate tempering between each sub-zero treatment."

"Any steel that has retained austenite cracks more quickly during grinding. Untempered martensite is somewhat brittle; consequently this tempering operation is done after the metal has been refrigerated to the temperature more suitable for that particular type."

"Martensite requires a little more space than austenite, which is the explanation of the phenomena of metal growth when subjected to sub-zero temperatures."

Conrad, Inc. produces a full range of industrial coolers for metal treating, and, environmental chambers for all types of laboratory and industrial testing and processing.

### For Rayon Research

ASHEVILLE, N. C.—American Enka Corp. has announced that the construction contract for the main portion of its million-dollar air conditioned rayon research building at Enka has been awarded to Merchant Construction Co., Asheville.

## TEMPMASTER WET COOLING & HEATING

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Now in one self-contained unit, with all field assembly and piping eliminated, at a cost well within the means of every potential user.

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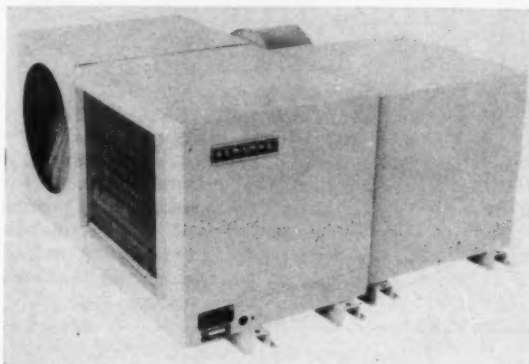
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## Residential Air Conditioning



'TEMTRON' central residential air conditioner with 2-ton cooling capacity, Model 20H1.

### 'Temtron' Residential Conditioner Claims Low Cost with New Heat Rejection System

CAMBRIDGE, Mass.—A new central residential air conditioner that is claimed to provide 2 tons of cooling from a 1-hp. compressor has been introduced by Ultrasonic Corp. here.

A new type heat rejection system developed by Ultrasonic is said to be the key that enables the "Temtron" unit to use from 30% to 50% less electricity than comparable units and to operate on less than 10 g.p.h. of cooling water that can be supplied through a 1/4 in. i.d. copper tube. A high efficiency water saver is built into the unit, the manufacturer said, eliminating the need for additional cooling devices.

Operating costs, based on New York City cost for water and electricity, will be more than 40% cheaper than comparable air-cooled units and only half the cost of comparable water-cooled units, according to the manufacturer. Price is claimed to be 10% to 20% lower than competitive 2-ton conditioners.

Weighing less than 300 lbs., the 2-ton unit measures 42 by 36 by 21 in. The heat rejection system measures 14 by 16 by 20 in. and includes condenser, spray, and pump. It has a 4 1/2-ton capacity.

A small diameter centrifugal blower with a low sound level is included, as are a water valve and thermostat.

Capacity of the unit is 24,000 B.t.u./hr. under ASRE conditions.

Fred Shepard, sales manager of the Temtron Div. of Ultrasonic, states that the 2-ton Temtron is the first in a line of central residential air conditioners and combined air conditioning and heating equipment the company plans to offer.

Other units that will be available in the coming months include 1 1/2 and 3-ton central air conditioners, a 1-ton console-type air conditioner, and 2 and 3-ton combined heating and air conditioning units.

The 2-ton Temtron is now on the market in New England, the New York City area, and throughout the south, Shepard said. The company plans to extend the distribution throughout the midwest and west before the end of the year, he added.

He declared the company is setting up distribution through established air conditioning and heating distributors and dealers and will support sales efforts with a vigorous regional and national promotion campaign.

### Pyle-National High Velocity Converter Regulates Air Flow from Supply Ducts

CHICAGO—The Pyle-National Co., manufacturer of electrical and air conditioning equipment, recently introduced a high velocity converter, which is an air flow adjusting device designed to regulate the flow of air out of high velocity supply ducts, thus permitting air conditioning at a low noise level and at a comfortable velocity.

This new converter, the result of three years of engineering research, was invented by Edwin J. Kurek, engineer of the Multi-vent Div. of Pyle-National.

The device regulates the flow of air out of high velocity supply ducts by reducing the static pressure in the vicinity of the outlet, through the principle of static pressure regain.

This converter will make possible for the first time the air conditioning of a room or area, off of a main, high velocity supply duct, without need for bulky acoustical treatment, heretofore associated with this type of air conditioning, the company claims.

This new converter will be utilized to great advantage, and savings, wherever a high velocity air conditioning setup is needed, such as large multi-story office buildings, railway cars, hotels, hospitals, theaters, etc.

Using the converter in high pressure systems offers the possibility of great savings in space normally required for ducts, the company said. This, of course, is conducive to more floors per given

building height, hence more rental area and greater income.

This new converter will perform in a manner somewhat analogous to that of a toy electric train transformer. Whereas an electric train transformer will reduce 110 volts to 6 volts, in order to avoid shock and fire, this new converter will "bleed off" into a room or area, from the main, high velocity air ducts, just enough air to effect the desired temperature, without disturbing the flow and pressure of high velocity air through the central ducts, the manufacturer explained.

Just as a toy train transformer eliminates the possibility of shock and fire, this converter eliminates noise and blasts of cold air, as the air is channeled off the central ducts into a room.

Plans for merchandising and selling this new converter are presently being formed, and will be announced in the near future, according to the firm.

### Chelsea Promotes Blew To K. C. Representative

PLAINFIELD, N. J.—Chelsea Fan & Blower Co., Inc. has announced the promotion of George C. Blew to representative in Kansas City, Mo.

Blew was formerly service manager at the home office here. His territory will include Kansas, Nebraska, Oklahoma, northern Texas, western Missouri, and Ft. Smith, Ark.

### Coleman Sales \$22,688,533 In First 7 Months

WICHITA, Kan.—The Coleman Co., Inc., recently reported net sales of \$22,688,533 in the first seven months of 1954. Earnings for the period were \$553,385,

equal to \$1.29 a share on the 400,000 shares of common stock.

For the same period last year sales were \$25,021,930 with earnings of \$1,317,283, or \$3.21 a

share, according to the report.

In his report to the board, Sheldon Coleman, president and general manager, said both sales and earnings improved during July and in the first part of August.

The Coleman Co. manufactures home heating and air conditioning.

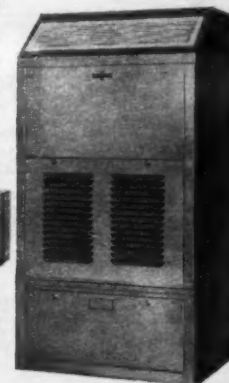
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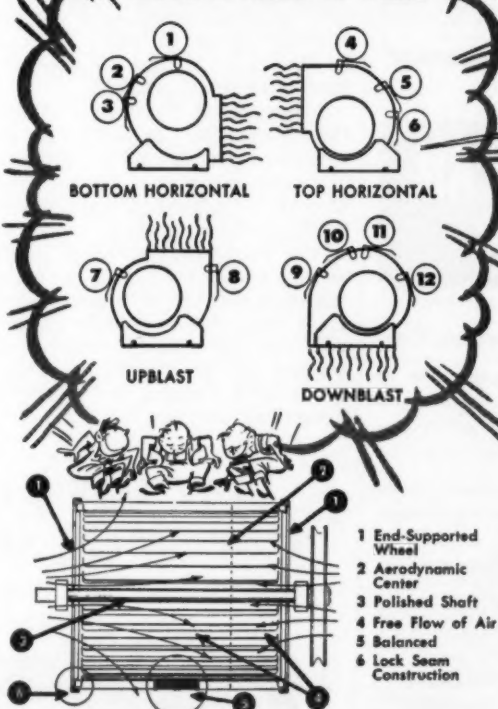
### Here's a Completely New Idea In Blowers...



**Viking  
UNIVERSAL BLOWER  
with LOCK-ON Feet**

**... Offering Lower Unit Cost ...  
Smaller and More Flexible Inventories  
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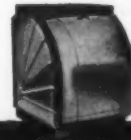


- Adaptable to all standard installation positions
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- Basic Scroll, Motor Mounting Bracket and Blower Wheel utilizes every new structural design improvement recently incorporated in conventional Viking Blowers to permit you to ship them installed, to expect many years of quiet trouble-free performance in your furnaces or air conditioners.

**Rugged Wheel Design**... Lock seamed end supports give blower wheel the strength needed to permit it to reach its destination point in tip-top condition. The end support principle and Vikinetic balancing make these units so quiet they have amazed everyone.

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Window Fans



## Refrigeration Problems and their solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

### Pressures Within The Compressor Cylinder (3)

Let us again show the indicator diagram of an actual compressor, similar to the one shown in Fig. 4, and draw on it an "ideal" diagram similar to the one that was shown in Fig. 5. These two diagrams together are shown in Fig. 6, the diagram ADEI for the actual compressor being in the heavy solid line and the diagram PQRS of the ideal compressor being in the dotted line. As before, the light line XY indicates condensing pressure and MN suction pressure.

#### EFFECT OF CLEARANCE VOLUME ON THE DIAGRAM

The curve EI shows the effect of clearance volume, compared to the ideal RS. The greater the clearance volume the farther to the right E will be from R when the discharge valve closes, the longer and more sloping curve EI will be, and point I (where the suction valve opens) will be even farther to the right from S.

The area to the left of curve EI represents loss of pumping ability due to re-expansion of trapped high-pressure gas in the clearance between the top of the piston and the valve plate, plus the ports through the valve plates and other re-expansion spaces above the top of the piston.

#### HEAVY VALVE SPRINGS REQUIRE GREATER PRESSURE DIFFERENCES

The distance from the line MN down to the line IA represents the amount of pressure, below suction pressure, that is required to open the suction valve and keep it open during the suction stroke. If the valve spring is stiff, more difference in pressure must be built up across the suction valve to open it.

Fig. 7 shows the effect of light or stiff suction valve springs on the pressure inside the cylinder before the suction valve opens and stays open during the remainder of the suction stroke.

A light suction valve spring is very important on compressors to be used on low and ultra-low temperature applications, for a high pressure difference to open and close the suction valve means that the amount of gas pumped will be reduced even though it is already low for the displacement.

#### STICKY SUCTION VALVES

If the suction valve tends to stick, the difference in pressure must be even greater to open the valve, resulting in the initial hump in the line shown in Fig. 8. If it continues to act sticky after it once opens at I, the line will continue to be very wavy.

If the parts of the suction valve are heavy, more pressure difference must be built up initially to get them to move, so the diagram will show the initial hump much the same as for a suction valve that is sticky on opening.

Fig. 9 indicates the effect of heavy and light discharge valve springs. A heavy discharge valve

is especially objectionable on a compressor having a good deal of clearance volume, for the gas trapped above the piston, being at a higher pressure, takes longer to re-expand down to a low enough pressure for the suction valve to open.

#### HUMP INDICATES HIGH INITIAL PRESSURE DIFFERENCE

The hump at the opening of the discharge valve indicates that the valve sticks at first or that the parts of the valve are excessively heavy and require the additional pressure difference to overcome their inertia.

Leaky discharge valves have an effect similar to increased clearance volume and reduce the volumetric efficiency of the compressor.

#### EFFECTS OF INCREASED HEAD PRESSURE

If the condensing pressure is raised, line XY is higher and the pressure in the cylinder during discharge of pressure from the cylinder into the condenser is also higher. This has several undesirable effects, among which are:

1. It increases the ill effects of clearance volume.
2. It increases the losses past the pistons.
3. It increases the amount of power required to drive the compressor. The amount of power is proportional to the area enclosed by the diagram.
4. It increases the superheating of the gas in the cylinder during the suction stroke, which decreases the amount of refrigerant pumped by the compressor and therefore its capacity.
5. It decreases the volumetric efficiency of the compressor.

#### THE COMPRESSION CURVE

Curve AD in Fig. 6 is the compression curve. Ideally, it should be like PQ, curving sharply upward indicating that the gas is being compressed rapidly and causing the discharge valve to open as soon as possible after the beginning of the compression stroke.

If this curve is long and more nearly a straight line, losses in compression are indicated. These may be from mechanical causes, such as piston or valve leakage, or they may be due to excessive superheating of the gas.

Although as previously stated, the compressor indicator is not suitable for field use in checking the pressures within the cylinders of small high-speed compressors in the field or small shop, a study of the indicator diagram, or "card" as it is commonly called, is revealing as to how the pressures change in a compressor cylinder during the suction and compression strokes and the effects that various compressor designs and operating conditions have on the diagram.

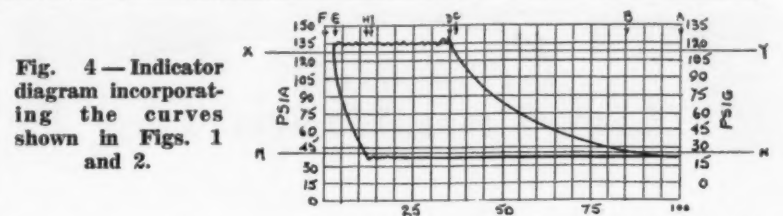


Fig. 4—Indicator diagram incorporating the curves shown in Figs. 1 and 2.

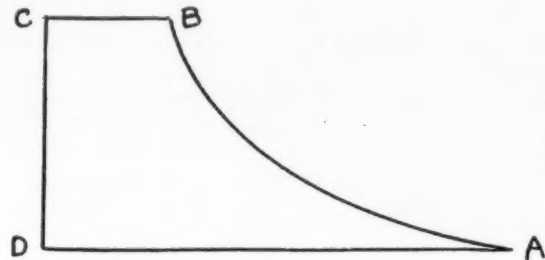


Fig. 5—Ideal indicator diagram of a compressor without clearance or losses, and whose valves are without weight or spring tension.

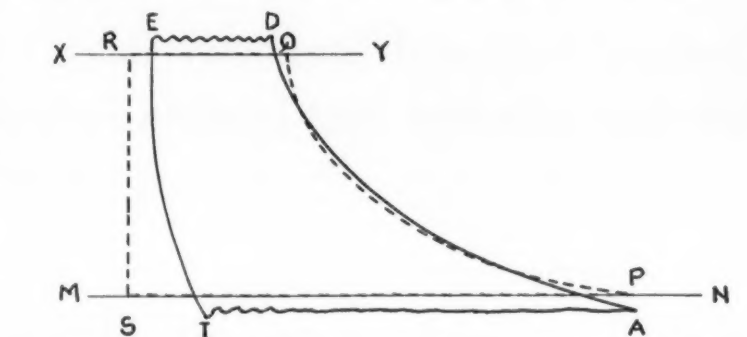


Fig. 6—Ideal diagram (dotted line) superimposed on actual diagram (solid line).

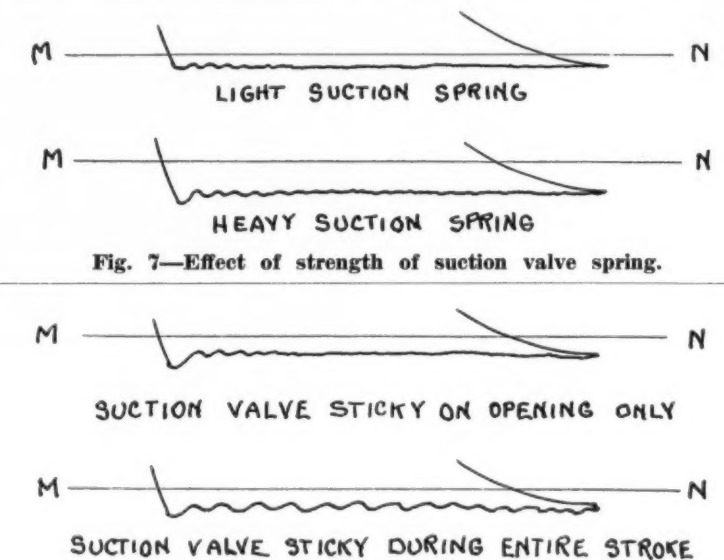


Fig. 7—Effect of strength of suction valve spring.

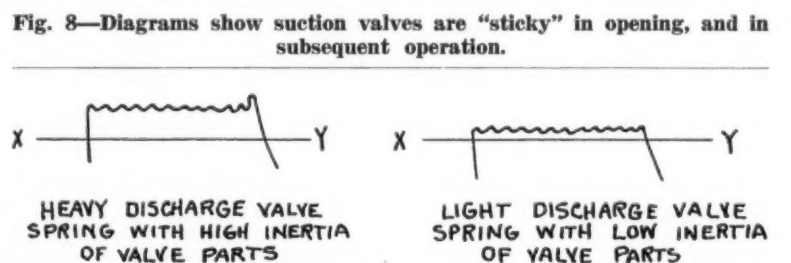


Fig. 8—Diagrams show suction valves are "sticky" in opening, and in subsequent operation.

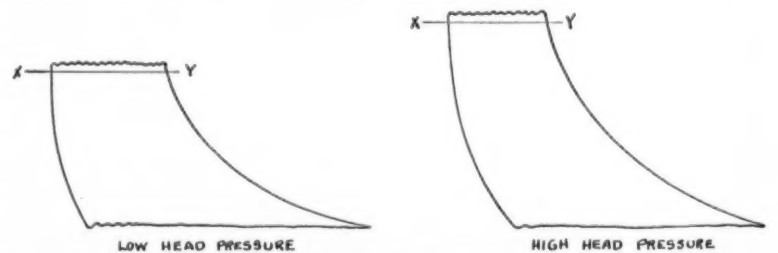


Fig. 9—Effect of strength of discharge valve spring and weight of discharge valve parts.

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Made right to fit right to work right in either natural or forced convection units, the Ranco Type 019-1559 provides better protection for perishables, helping to prevent drying out, shrinkage and spoilage.

This control assures uniform fixture temperatures and uniform high relative humidity. Defrosting of the coil is completely automatic, regardless of weather or load conditions, or cold location of the compressor. The Ranco Type 019-1559 automatically changes its differential to suit the load of each running cycle.

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sludge—flux—chips—  
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## 'Democracy In Action'

## Los Angeles Ceremonies Mark Graduation Of Group from Apprenticeship Training

LOS ANGELES—Graduation ceremonies of the Joint Apprenticeship Committee for the Refrigeration and Air Conditioning Trade were held recently at the Rodger Young auditorium.

Speaking at the ceremonies, Archie Mooney, chief of the Division of Apprenticeship Standards, said that labor-management apprenticeship committees were one of the best examples of democracy in action.

In his years of service with the state, Mooney said, he has seen controversies ironed out between labor and management on such committees, and also cooperation.

"But," he added, "if the time comes when labor and management have no differences, then we won't have the free enterprise of a democracy."

## CHARLES WALLING HONORED

Mooney presented Charles Walling, proprietor of National Refrigeration Co., with the State Apprenticeship Council's Certificate of Meritorious Service for his efforts in originating the Refrigeration and Air Conditioning Joint Apprenticeship program and his continuous unselfish devotion to the cause of the apprentices.

Toastmaster for the occasion was Henry B. Ely, executive secretary of the Refrigeration & Air Conditioning Contractors Association of Southern California. He was assisted by E. H. Ballard, business manager of Refrigeration Fitters Branch of Local 250 of the United Association.

Archie Virtue, general organizer of the United Association, welcomed the apprentices into the UA and presented them with UA certificates of completion.

Receiving state certificates upon completion of their apprenticeship training were: Harry L. Bowe, Jr., Lawrence J. Carty, Roy Davis,

Hershel E. Dunn, Milan Hampe, Desideri Karaffa, Robert Keiffer, Everett Pascoe, and Donald E. Rodger.

## OTHERS PRESENT

Present also at the ceremonies were James Coulter, district supervisor, Bureau of Apprenticeship, U. S. Department of Labor; Harry L. Bowe, Los Angeles city schools apprenticeship coordinator, refrigeration and air conditioning trade; Joseph W. Morosi, general coordinator, apprentice training classes, Los Angeles Trade Technical Junior college; Harold P. Camp, field supervisor, Division of Apprenticeship Standards, State of California; and representatives of labor and management.

## Koldex Named U.S. Agent For 'Flica' Line of Valves

NEW YORK CITY—Koldex International, Inc. here has announced its appointment as sole U. S. agent for the "Flica" line of thermostatic expansion valves.

This line of valves is manufactured in the U. S. Zone of Occupied Germany by a well-established company which has been making expansion valves exclusively for over 20 years, according to Koldex.

"A feature of the Flica valve is that both needle and seat are made from a non-metallic material which is completely impervious to corrosion," Koldex said.

"The construction of the valve is such that a temperature at the valve body lower than that at the bulb will not effect its operation. The valve may be installed in any position and in any location."

Flica thermostatic expansion valves will be distributed exclusively through refrigeration wholesalers.

## Asbestos Sheet Packing Seals Against 'Freon-22'

MANHEIM, Pa.—A new compressed asbestos sheet packing for head gaskets on refrigeration compressors—claimed to be the first such material to seal effectively against "Freon-22"—has been developed and placed on the market by the Packing Div., Raybestos-Manhattan, Inc.

Known as R/M No. R-54, the new sheet is the first ever developed solely for air conditioning and refrigeration use. An all-purpose sheet, it has proved as effective in sealing against all other "Freon" as against "Freon-22."

The development of a gasket material which will seal against "Freon-22" solves a problem that has long troubled refrigeration engineers as "Freon-22" has a tendency to leak through other gasket materials.

Developed over a two-year period, R-54 has been tested on equipment installed in the Raybestos-Manhattan laboratory. The laboratory tests have been confirmed by application of R-54 in commercial equipment using "Freon-22." It meets A.S.T.M. 1170-G-1123 and A.M.S. 3231 requirements.

The binder in R-54 is a new type of "Neoprene" which has been specially extended. Seventy to 75% of the sheet is asbestos—uniformly opened and coated prior to the critically controlled sheeting procedure.

Special ingredients and a change in sheeting techniques account for the ability of R-54 sheet packing to seal against all "Freons."

The Neoprene binder was selected because it swells when in contact with the refrigeration oil in the "Freon." This swelling assures a tight seat on the flange and fills all spaces, thus preventing leaks past the gasket as well as through it.

R-54 sheet has a compression of 17% + 4%, compared to 12% + 4% for most other compressed asbestos sheets. The higher compression of R-54 helps to correct improper flange design and also requires lower bolt loadings. Recovery after compression is 35% based on compressed thickness.

A Neoprene type binder was selected for R-54 sheet because of the excellent service life obtained by R/M No. K-68 Neoprene compressed asbestos sheet packing for sealing against "Freon-22." Buna-N was ruled out because mechanical rubber parts bonded with Buna-N have not proved satisfactory against "Freon-22."

R-54 has an average tensile strength of 3,000 p.s.i. and a density of 1.10 ozs. per cu. in. It will bend 180° without cracking over a rod with diameter four times the thickness of the sheet.

R/M No. R-54 compressed asbestos sheet packing is available from all leading gasket cutters and is being introduced to refrigeration parts distributors. It is furnished in standard thicknesses of 1/4 in. through 1/8 in. and in 11 sheet sizes ranging from 40 by 40 in. to 150 by 150 in.

## County Seat Supply Opening Peekskill Branch In Sept.

WHITE PLAINS, N. Y.—County Seat Supply Co. here, wholesaler of refrigeration and air conditioning supplies, has announced that the grand opening of its fourth division, at Peekskill, N. Y., is to be held in mid-September.

The showroom-supply store-warehouse operation features exceptionally efficient bookkeeping, storage, selling, and showing arrangements, according to E. J. Glasser, sales manager and assistant secretary. The branch has approximately 20,000 sq. ft. of operating space.

## Houston High School To Have Refrigeration Class

HOUSTON, Texas — Refrigeration and air conditioning will be taught in Houston's first vocational-technical high school, which began classes Sept. 7.

New facilities for the courses have been added to the vocational school. It is the first time that students of high school age in Houston have had to earn fully accredited high school diplomas while learning trades.

## Wholesaler Opens In Greenville With \$600,000 Capital Stock

GREENVILLE, S. C.—General Wholesale Distributors, Inc. here, an air conditioning and heating equipment wholesale firm, has been granted a charter by the Secretary of State. Authorized capital stock is \$600,000. C. Kirby Hammond is president.

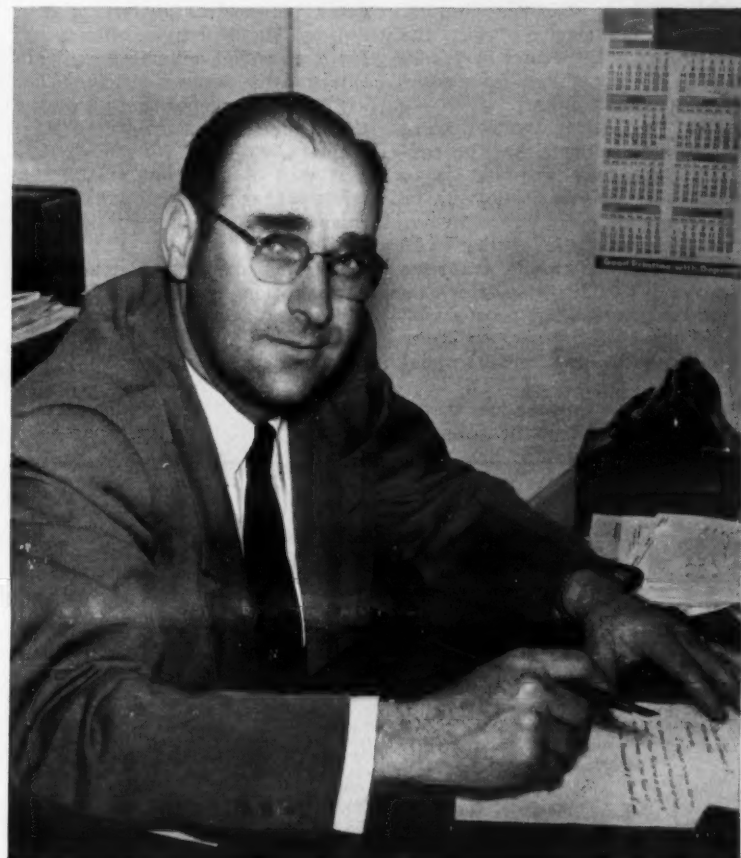
## SLANTS on Service

## Cooler Door Blows Open

We had trouble with an overlap cooler door blowing open as soon as the unit came off the hot-gas defrost cycle on a low temperature walk-in freezer (-17° F.) using a blower coil, writes Al Dalpiaz of Dennison, Ohio.

So we installed a Ranco 011-1754 pressure control to turn off the blowers at 25 lbs. suction pressure and turn them on at 10 lbs. suction pressure. This ended the trouble.

Installation of such a control could also be helpful in case the unit went off for any reason. As soon as the suction pressure rose to 25 lbs., the blowers would shut off. Otherwise, with the blowers operating and the unit off, the walk-in freezer temperature would rise very rapidly.



## KLIXON Motor Protectors Aid in Providing Customer Satisfaction Says Pittsburgh Motor Rebuilder

PITTSBURGH, PA.: Mr. V. E. Oswald, President of Electric Manufacturing & Repair Company, a leading motor rebuilder in Pittsburgh, has this to say about the advantages of Klixon Protectors —

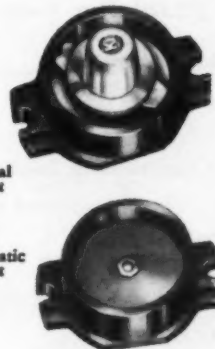
"I am glad to advise that the use of 'Klixon' Motor Protectors as applied to motors repaired in our plant have been very favorable.

"We feel they are an aid in providing customer satisfaction with motor operated equipment."

## Klixon Protectors Reduce Service Calls and Repairs by Preventing Motor Burnouts

The KLIXON Protectors, illustrated, are built into the motor by the motor manufacturer. In such equipment as refrigerators, oil burners, washing machines, etc., they keep motors working by preventing burnouts. If you would like increased customer-preference, reduced service calls and minimized repairs and replacements, it will pay you well to ask for equipment with KLIXON Protectors.

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## "...Happy with my selection of Tenney equipment"

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210 MIDLAND AVENUE • April 5th., 1954.

Tenney Engineering, Inc.,  
1090 Springfield Road,  
Union, New Jersey.

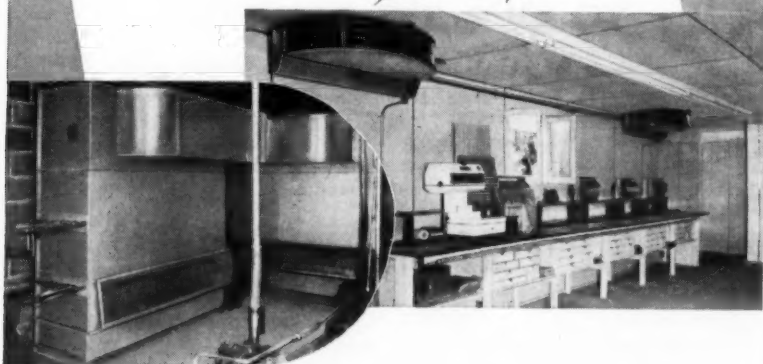
Gentlemen:

I am certainly happy with my selection of the Tenney equipment used in the Bandy Farm super market. The T. W. line offering a double set of motor and fan, is doing a wonderful job.

Yours very truly,  
Charles A. Mattie  
Charles A. Mattie, Jr.



\*TWF Unit Coolers, with filters, and Tenney Cooling Tower



Better than anything we could say this short, straight-forward letter tells the story of another contractor—and his customer—satisfied with Tenney equipment. This time it's TWF Unit Coolers (with filters) in meat storage, cutting and packing, and vegetable rooms in Bandy Farms, the largest and most modern supermarket in Union County, N. J.

For full information write for Bulletin 104-54.



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Engineers and Manufacturers of Refrigeration and Environmental Equipment



## Trade-Ins—Some Suggestions for Handling

### 'Tools' for Appraisals, Methods of Promoting Sales of Used Appliances Outlined at Hotpoint 'Shirtsleeves' Conference

Conducted in a unique manner, a series of distributor salesmen's "shirtsleeve" workshop conferences were held by the Hotpoint Co. in key cities throughout the U. S. in the latter part of August.

Purpose of the workshop conference was to help distributor salesmen to become better equipped to do their jobs, and to exchange ideas. They were also confronted with examples of current problems facing their retail accounts, and required to work out possible solutions.

One of the biggest problems facing retailers of household refrigerators and other major appliances today is that of trade-ins. In this, the second report from these conferences, some of the suggestions pertaining to the handling of trade-ins are outlined.



GETTING DOWN TO CASES, the wholesale salesmen attending Hotpoint's "workshop" conferences were required to present solutions to typical field problems before groups of their fellow salesmen, and were then required to answer questions fired at them from the floor. Here Ed Stevenson (at rostrum) of B & W Distributing Co., Grand Rapids, Mich., gets a little quizzing from Stan O'Hair, GESCO, Chicago.

CHICAGO—"I think it has been the consensus of this conference," said Floyd Slasor, veteran Hotpoint executive summing up one of the sessions at a distributors' salesmen's conference, "that the main thing for the dealer on trade-ins is to 'do something,' have some sort of a definite plan.

"For the dealer who doesn't want to handle trade-ins," he continued, "the easy way out is to sell them to someone who will, or to a junk man.

"Or perhaps the dealer who doesn't want to handle trade-ins might play it a little smarter—by trying hard to sell the prospect on the purchase of the new appliance before talking too much about trade-ins.

"Then he can quote a low trade-in figure, and when the prospect

objects, suggest that the man sell it on his own, thus getting much more out of it, pointing out that many 'shoppers' believe that they get a better deal by buying from a user. The dealer can offer to pay for a classified advertisement, and this usually proves enticing.

"If such a proposition goes over, the dealer has a sale free of a trade-in."

It was brought out at the conference that trade-ins can be useful as a promotion means for the sale of new products. The "rental plan" was cited as an example of a promotion method.

A used appliance is rented to low income families at a nominal cost, with the understanding that rental charges can be applied later on a new model. Big point of this is that it virtually guarantees a

sale for the dealer, and almost always at the full list price.

One of the main things that any dealer must do if he is to handle trade-ins is to approach the problem in a business-like way, it was agreed.

First, he should get as much of an idea about the trade-in market as it is possible to obtain. Then he should get firmly fixed in his mind how far he can go in granting allowances for used appliances.

#### Setting the Allowance

Each dealer will have to work out his own formula on this score. Any "Blue Book" of trade-in values is recognized as only being a starting point, except possibly for "junkers." A recent "rule of thumb" method sets a "top" allowance at one third of what the dealer believes he can get for the reconditioned appliance.

Another method is to set a "bottom" figure on the margin of profit left on a new appliance after granting a trade-in allowance. For example, on a product with a 35% margin of profit, the dealer might figure to "dicker" on a trade-in until he had 25% margin left, but then would go no lower.

One other version of this, but expressed a little differently, is for the dealer to use a certain percentage of the retail selling price as his guide on how much he will go on a trade-in.

Dealers are well advised to have as many "tools" as they can muster for the "dickering" session on trade-ins with a prospective purchaser. A "Blue Book" of "official" trade-in values is one such tool. Another is the "appraisal form."

#### Use of Appraisal Form

The more "official" an appraisal form can look, the more effective it may be. On it the dealer, or whoever is negotiating with the prospect, marks down a number of seemingly pertinent facts about the prospect's used appliance, and particularly emphasizing the reconditioning costs.

The primary purpose, of course, is psychological, a method of "tactfully devaluing the old appliance" and the more business-like this approach can be, the more the prospect may be impressed by it. Such an appraisal form can have a further value, in forming a book-keeping record of all the used merchandise taken in trade, and the amount allowed for each one.

If others than those with a proprietary interest in the dealership (salesmen, for example) are permitted to make appraisals, the dealer must find some method of keeping appraisals under control. Most common method is to "make the salesman a partner in every

## SPECIALTY SELLING METHODS

deal" in other words, sharing the loss or gain that is made on the trade-in.

In a typical example of this procedure, where salesmen make their own appraisals on trade-ins, the description of the appliance taken in and its cost (on the actual sale) are posted to the salesman's stock book following each transaction.

Added to this figure is the cost of reconditioning, plus a sales commission, delivery charges, and any other expenses that may be incurred during a 30-day period after its delivery.

#### Salesman Shares Profit

Then when the used appliance is sold, any profit or loss which results is shared equally by the management and the salesman, except when the loss exceeds 5% of the sale. In some cases the salesman might be expected to assume everything beyond this figure, or perhaps the loss is shared on some percentage basis with the management.

Some large dealerships might find it profitable to have a man especially selected to be an "appraiser" on the value of used appliances, and possibly also make such an individual the "closer." In some cases this might be the dealer himself, or possibly the sales manager. In such cases, of course, the salesmen are devolved of any responsibility on the trade-in.

The question of "how far to go" in reconditioning old appliances is a ticklish one. It was generally conceded that in the present market, even "used" equipment is getting on a competitive basis, and the buyers are getting more critical of the type of merchandise offered. On the other hand, if too much money is put into reconditioning, it may make the cost of the used appliance more than the market will bear.

#### Appearance Big Factor

However, it is generally agreed that the amount and kind of reconditioning done ties in closely with the next, and possibly the most important, factor in handling trade-ins—the promotion of the used appliances to the buying public.

There is a tie-in, because some who have studied the problem most closely believe that the most important single factor in promoting trade-ins is the appearance of the used merchandise.

Thus, the better the reconditioning job can make the used model look, the greater are its chances of being sold at a profitable figure. Some dealers have also found it

helpful to use signs descriptive of the work that has been done."

Some sort of a guarantee, even though it may be of short duration, is also deemed helpful.

Having some of the used appliances in actual operation has also proved a useful selling aid.

#### Promote Facilities

A dealer who has good reconditioning facilities should make capital of the fact, by letting the prospect see the shop (if it is handy) or photographs of it. Some dealers have even gone so far as to make wall murals of photographs of their reconditioning facilities.

Some outlets which use fairly sizable advertisements on used appliances make a habit of pasting copies of the ads on the used merchandise. It helps to identify them, and also serves as a pricing medium.

Standard pricing tags are also recommended, as they serve to bolster a prospect's confidence.

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by James J. LaSalvia

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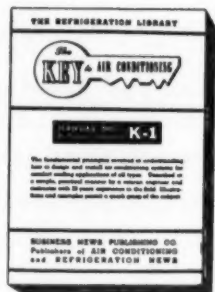
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MANUAL NO. K-3—General discussion of heating systems; selection of heating coils (air friction, condensation); description and operation of evaporative condensers; water cooling towers; automatic controls; piping refrigerant, water, and steam; and insulation problems.



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## Airtemp Sales Plan--

(Concluded from Page 1, Col. 2)  
expected to carry the story to their dealers in the near future.

The program is based on the premise that the one main goal of merchandising is to develop and promote organized programs to increase sales. To carry out this theme, the Airtemp Div. has re-organized its merchandising activities to develop specific programs for specific markets and has created three new posts to direct the programs.

Working under the supervision of E. A. Nash, merchandising manager, E. Palmer will direct advertising and promotion for room air conditioners, F. J. Koehnen, Jr. will do the same for commercial air conditioners, and A. J. L. Moritz, Jr. will handle the job for residential air conditioners.

"To stimulate maximum consumer interest, these major lines must be individually and thoroughly merchandised," Nash explained.

### VERTICAL MERCHANDISING

"We have, therefore, initiated what we term a vertical merchandising operation. Three new sections, each charged with the promotion of one type of product, have been established.

"This evolutionary step, we feel, will enable us to assist and guide more successfully the wholesalers and retailers of Chrysler Airtemp air conditioning equipment."

Moritz, who was a member of the factory team explaining the program to district managers in the northern part of the country, added that the new setup will permit a more intensive promotional program than has ever been carried out before.

He explained that the motives that spur a man to buy air conditioning for his business are not the same as the ones that cause him to purchase air conditioning for his home. And he would buy room coolers for entirely different reasons from either of these.

The new setup, he said, would assure that a campaign with primarily commercial appeal would not be used to sell residential cooling or room air conditioners.

Speaking for his own department, he said that residential promotion and advertising would be carried out in three phases. The first phase will be designed to help the distributor, the second to help the dealer, and the third would combine everything to help sell the consumer. All would be aimed at producing more sales at the retail level.

### SEPARATE CATALOG FOR EACH TYPE OF PRODUCT

Jack Davidson, manager of application engineering, another member of the northern team, announced to district managers that one of the new sales tools that will be put in the hands of distributors and dealers will be a merchandising catalog. A separate catalog has been compiled for each type of air conditioning to include all merchandising activity, past, present, and future.

Purpose of the catalog is to put between the covers of a single book all of the merchandising aids that Airtemp offers, he said, so that the salesman can find any item he needs in a matter of seconds.

The catalog, Davidson said, will not only contain samples of all the aids, but will tell the distributor and dealer how to use them. The loose-leaf style book is divided into 27 sections, classifying the material under such titles as special promotions, policy, organization, presentations, literature, direct mail, competition, spec sheets, application, installation, and manuals.

Another sales aid will be new compressor and condenser ratings that will reflect the latest improvement in these products, Davidson said.

## Program Announced for Midwest RSES Association Convention To Be In Wichita, Kan. Sept. 23-26

WICHITA, Kan.—The recently released final program for the sixth annual Midwest RSES Association convention and educational conference here Sept. 23-26 indicates that it will be one of the most comprehensive programs on the "practical" applications of air conditioning and refrigeration ever to be offered.

There will be three full days (Thursday, Friday, and Saturday) of technical sessions, jam-packed with lectures and demonstrations on present-day engineering, installation, and service techniques.

The Broadview hotel will be headquarters for the meeting. All meetings will be open to all refrigeration and air conditioning men who may be interested, states E. W. Muck, president of the host Air Capital chapter of RSES.

### THURSDAY, SEPT. 23

9:30 a.m. Conference called to order by General Chairman Arnold Henson.

10 a.m.—Visual demonstration of "F-12" and "F-22" with Glass Evaporator—Charles Wirth, III, Kinetic Chemicals Div., E. I. DuPont Co.

11 a.m.—"Industry Relationship," Star Hull, executive secretary, Refrigeration Equipment Wholesalers Association.

1 p.m.—"Solenoid Valves, Sizing and Application," Tom Melville, A-P Controls Corp.

2 p.m.—"Installation and Servicing of Window Air Conditioning Units," Roy Garrison and Joe B. Jones, O. A. Sutton Corp.

3 p.m.—"Installation and Servicing of Hermetic Units," Don E. Friedman, Hussmann Refrigeration.

4 p.m.—"Question & Answers," moderator, Paul B. Reed. Panel: Charles Wirth, III, Star Hull, Tom Melville, Roy Garrison, Joe B. Jones, Don E. Friedman.

7:30 p.m.—Midwest association board meeting, English Room.

### FRIDAY, SEPT. 24

9 a.m.—"Moisture, How It Gets Into a Refrigeration System and How To Control It," Lou Wallace, Ansul Chemical Co.

10 a.m.—"Seven Simple Steps of Diagnosis 'The Only Way,'" Don Schaefer, Frigidaire Div., General Motors Corp.

1 p.m.—"Truck Refrigeration," J. A. Wilkerson, Dole Refrigeration Co.

2 p.m.—"Automotive Air Conditioning," Willis Stafford, Detroit Controls Co.

3 p.m.—"Air-Cooled Condensers for Refrigeration and Air Conditioning," Charles Segal, Kramer Trenton Co.

4 p.m.—"Questions & Answers," moderator, Paul B. Reed. Panel: Lou Wallace, Don Schaefer, J. A.

Wilkerson, Willis Stafford, Charles Segal.

### SATURDAY, SEPT. 25

8:30 a.m.—Midwest association meeting, English Room.

9 a.m.—"Pump Sizing for Towers," W. H. Plowman, Gould Pump Co.

"Cooling Towers," O. L. Michael, Santa Fe Towers.

11 a.m.—"Water Treatment of Cooling Towers," Ed Ross, Garman Co., Inc.

1 p.m.—"Production of Copper Tubing and Fittings," Guy Frizzell, Mueller Brass Co.

2 p.m.—"Automatic Defrost Systems," Tom Morrison, Paragon Electric Co.

3 p.m.—"New Trends in Thermo Valves," Arley Baker, Alco Valve.

4 p.m.—"Questions & Answers," moderator, Paul B. Reed. Panel: W. H. Plowman, O. L. Michael, Ed Ross, Guy Frizzell, Tom Morrison, Arley Baker.

6:15 p.m.—Cocktail Hour, guests of Refrigeration Wholesalers.

7 p.m.—Banquet.



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Berea, Ohio



**AIR CONDITIONING & REFRIGERATION News**

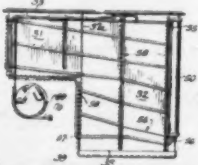
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# PATENTS

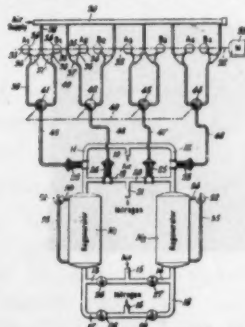
Week of May 4  
(Continued)

**2,677,350. FREEZER OF THE TOP OPENING TYPE.** Carl F. Alsing and Charles R. Dill, Evansville, Ind., assignors to Soeger Refrigerator Co., St. Paul, Minn., a corporation of Minnesota.



1. In an open top freezer, the combination of a pair of inner metal liners of rectangular box-formation open at the top and of the same width but of different height, said liners being joined together at two adjacent sides, in heat-conducting relation with each other, and with the top edges flush with each other to form a liner assembly, the shorter liner forming a quick freeze compartment with space below it for a machine compartment, and the longer liner forming a food storage compartment, an outer metal shell of complementary form spaced from the liner assembly on all sides and bottom and insulated from the liner assembly by blocks of insulation, an insulating cover closing said open top, a breaker strip connecting the top of the liner assembly and the shell about the open top, a motor compressor in said machine compartment, a condenser coil carried on the inside of said shell in heat-conducting relation with the shell and connected to the compressor outlet, a capillary tube connected to the condenser and extending to an evaporator coil, said evaporator coil having a bottom portion in heat-conducting relation with the bottom of said shorter liner and extending downward on the longer liner; and being wrapped about said longer liner and proceeding upwardly and being wrapped about both said liners and proceeding upwardly to the top of the liner assembly, a vertically extending cylindrical receiver of substantially larger size than said evaporator coil carried by said longer liner and extending vertically on said longer liner, said wrapped liner coil having its lower end connected to the bottom portion of said receiver and having its upper end connected to the upper portion of said receiver, a suction tube from the top end of said receiver to the compressor inlet, and said bottom coil on said shorter liner having a T-connection to said wrapped coil adjacent the lower end thereof but spaced from said receiver, and a charge of refrigerant in said receiver extending well up in the receiver above said short liner bottom coil to flood said latter coils and cool the evaporator quickly and thoroughly on starting of the motor compressor.

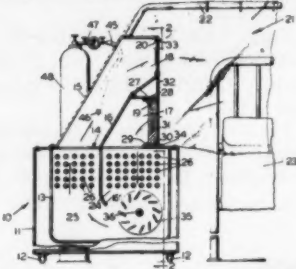
**2,677,352. METHOD AND APPARATUS FOR CONTROLLING PERIODICALLY REVERSED HEAT EXCHANGE DEVICES.** Philip K. Rice, White Plains, and William G. Tuel, Kenmore, N. Y., assignors to Union Carbide and Carbon Corp.



1. A method of preventing excess accumulation of condensable material in periodically reversed heat exchange devices employed for cooling an initially warm gas containing such condensable material by a cold gas which is initially free of the condensable material including condensation of material from the initially warm gas and evaporation of material into the initially cold gas, the periodic reversal being effected by a succession of complete reversal cycles each consisting of two periods during the first of which the initially warm gas flows from the warm end to the cold end of one of a heat ex-

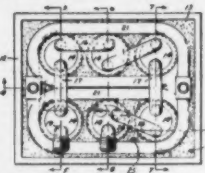
change passage pair while the initially cold gas flows from the cold to the warm end of the other of the heat exchange passage pair and during the second period of the cycle the initially warm gas flows from the warm to the cold end of the other of said pair while the initially cold gas flows from the cold to the warm end of the first mentioned one of said pair, which method comprises causing during each complete reversal cycle of a succession of cycles the flow of one of said gases through one of the heat exchange passage pair to be more by a predetermined amount than through the other of said pair until a residue of condensable material tends to clog one of said pair; then causing the flow of said one gas through the other of said pair to be more by a predetermined amount than through said first-mentioned one of said pair to reduce said accumulation of condensable material in the partly clogged passage; and when condensable material tends to clog the originally unclogged passage, repeating the first step.

**2,677,353. AIR COOLING OXYGEN CIRCULATING DEVICE.** Randolph Lee, Maywood, Ill. Application Oct. 11, 1951.



1. An air cooling and circulating device adapted to be connected to a source of oxygen comprising, a container, a box positioned within said container, said box having an opening at its upper end, an extension projecting upwardly from the container, said extension being in communication with the opening of said box, a baffle positioned within the extension to divide the same into an inlet passage and an outlet passage, said baffle extending through the opening of said box into the box to divide said box into an inlet chamber and an outlet chamber, said chambers being open and being adapted to communicate with an enclosure, a plurality of cooling coils disposed in the inlet and outlet chambers immediately below the opening of said box, a blower in said inlet chamber disposed immediately below said coils in the inlet chamber, said blower being arranged to circulate air entering into said inlet passage over said cooling coils and through said outlet passage, a filter element disposed in said inlet passage substantially adjacent said cooling coils in the inlet chamber, mechanical refrigeration means connected to said cooling coils, and a reticulated member disposed over said opening of the outlet passage and over the filter element disposed in the inlet passage.

**2,677,354. LIQUID COOLER AND DISPENSER.** Donald Arenz, Rochester, Minn., and Raymond L. Adolf, Prophetstown, Ill. Application Oct. 24, 1950.

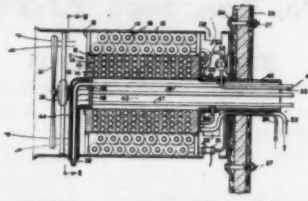


An apparatus of the kind described, comprising: an enclosure, a container within the enclosure, a series of cylinders intercommunicating with each other within the container forming closed containers, means interconnecting the cylinders with each other for successively admitting liquid at the uppermost portions thereof from the lowermost portions of succeeding cylinders of the series, means for delivering liquid from a source of supply to the first cylinder of the series, means for dispensing liquid from the last cylinder of the series to the exterior of the enclosure, a refrigeration system within the enclosure having refrigerated coils surrounding the cylinders for cooling liquid within the latter, mastic means filling the container for solid insulation of the cylinders and coils.

**2,677,355. COOLING SYSTEM FOR BEVERAGE STORAGE AND DISPENSING INSTALLATIONS.** Eldon S. Wright, Youngstown, Ohio.

1. In beverage cooling apparatus for use in beverage storage and dispensing systems having an insulated storage room located remotely of a beverage dispensing

outlet, fluid-tight insulated duct means communicating with said dispensing outlet and said storage room, means for circulating a cooling liquid in said duct, and



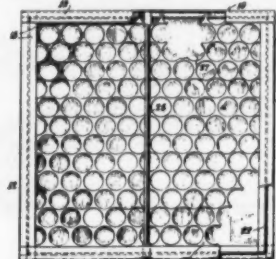
beverage lines communicating with said outlet and said room through said duct; the combination of a casing adapted to be mounted within said room; a heat exchange block mounted within said casing in spaced relation to the side walls thereof, said heat exchange block comprising a body of heat conductive material having therein in heat exchange relation a refrigerant coil and a cooling liquid coil, and said body having a cavity therein, one end of said cavity being closed; a second refrigerant coil positioned in the space between said heat exchange block and said casing and defining a tortuous path for air flowing axially through said space, said refrigerant coils being connected in series relation; a fan mounted within said casing adapted to cause air to flow over said second refrigerant coil; conduit means communicating with the cavity in said heat exchange block adapted to be connected to said duct means communicating with said outlet and said storage room; said beverage lines being partially housed within said conduit means and said cavity and passing out of said cavity at the closed end thereof; said duct means, said conduit means and said cavity being adapted to retain a liquid; said means for circulating comprising a pump, a first liquid line connecting the outlet of said pump and one end of said liquid coil, a second liquid line connecting the inlet of said pump and communicating with said duct means near the upper portion thereof, and a third liquid line connecting the other end of said liquid coil and communicating with said duct means near the lower portion thereof; and refrigerant compressing and condensing apparatus communicating with said second and first refrigerant coils adapted to circulate refrigerant therethrough in the direction from said second to said first refrigerant coil.

**2,677,394. TURBULENCE STRIP FOR HEAT EXCHANGER TUBES.** Howard F. Brinen and Fred M. Young, Racine, Wis., assignors to Young Radiator Co., Racine, Wis., a corporation of Wisconsin.



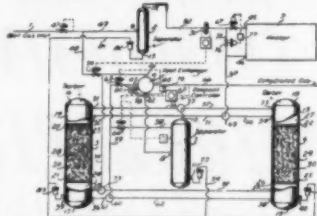
1. An agitator for tubular heat exchangers comprising, a spine section having arcuate-shaped lobes struck out transversely therefrom with the plane of each lobe disposed at an angle to a transverse radial plane normal to the opposite edges of the spine section and with the peripheral portions of the lobes most remote from the spine section disposed in a circumference embracing the opposite edges of the spine section.

**2,677,436. CASING FOR AIR FILTERS.** Andrew Masek, Bayville, N. Y., assignor, by mesne assignments, to Pittsburgh Plate Glass Co.



1. In combination with air filtering material, an air filter casing for said material comprising a four-sided open framework having sides of reinforced I-beams which are butted against each other in the framework to give a light but rigid structure having two open faces and a skeletonized wire network positioned across each of said open faces in which each I-beam comprises a center web having a pair of oppositely disposed cross-flanges position along the top and bottom edges thereof which extend outwardly from the exterior surface of the web at an angle of approximately 90° and which are double back on themselves and extended inwardly beyond the interior surface of the flange and prevent it from warping during use and to form a longitudinal pocket opening into the interior of the casing which contains an edge portion of one of said wire networks, two of said I-beams having cross-flanges which are extended in a longitudinal direction out beyond each end edge of the web, which longitudinally extended end portions are positioned in the pocket of the remaining two adjacent I-beams in the assembled casing in an abutting relationship to give the casing rigidity and dimensional stability.

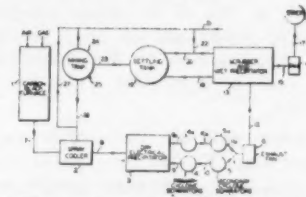
**2,677,438. PROCESS FOR REMOVAL OF WATER AND WATER VAPOR FROM A STREAM OF HIGH PRESSURE GAS.** Laurence S. Reid, Norman, Okla.



1. The process of dehydrating a wet gas stream at substantially high pressure including cooling the gas to effect con-

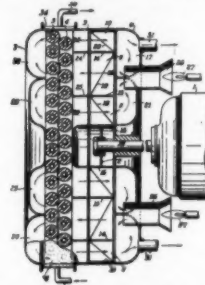
densation of liquefiable components of the gas stream removing condensates of the gas, sorbing water vapor from the gas stream, expanding the gas stream after the water vapor has been absorbed therefrom, and bringing the expanded gas stream into heat exchange contact with the wet gas stream to effect said cooling of the wet influent gas stream.

**2,677,439. COLLECTION OF SUSPENDED PARTICLES.** Carl W. J. Hedberg, Bound Brook, N. J., assignor to Research Corp., New York, N. Y.



1. The method of collecting suspended solid water-insoluble particles from hot gases which comprises passing the hot gases through a cooling zone, passing the gases from the cooling zone through a dry collecting zone and separating a substantial portion of the suspended particles therein in dry condition, thereafter passing the gas stream through a wet collecting zone and separating a major portion of the residual suspended particles therein in contact with water, and injecting an aqueous slurry of the water insoluble particles collected in the wet collecting zone into the hot gases in the cooling zone under flash-drying conditions whereby the liquid portion of the slurry is substantially vaporized and the solid content thereof is resuspended in the cooled gas stream.

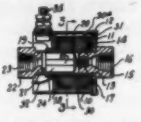
**2,677,497. FAN.** William Wycliffe Spooner, Hkley, England. Application Jan. 19, 1951, Serial No. 306,765. Claims priority, application Great Britain, Feb. 4, 1950.



An axial flow fan assembly comprising a casing, a shaft rotatably mounted in said casing, means to rotate said shaft, three concentric substantially co-planar annular sets of axial flow blades on said shaft for rotation with one another and with said common shaft, said three sets of blades including an inner set, a middle set and an outer set, the middle set of blades being disposed radially intermediate said inner set and said outer set, all of said blades being inclined relative to a plane transverse of the shaft axis, the blades of said middle set being inclined in the opposite direction to the blades of said inner and outer sets, said casing having at least one cover member adjacent one side of said sets of blades, said cover member being of dish form and including an inner and an outer annular recess, said recesses joining approximately at the mid diameter of said middle set of blades, said inner and outer sets of blades being adapted to force a fluid in one axial direction and said middle set being adapted to force the fluid in the opposite axial direction, said recesses enabling said fluid to flow in two circuits in said casing, one of said circuits being through said middle set of blades in one direction and through said outer set of blades in the opposite direction, and the other of said circuits being through said middle set of blades in said one direction and through said inner set of blades in said opposite direction.

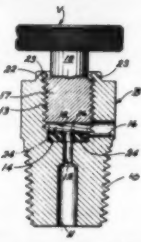
**2,677,534. SOLENOID CONTROLLED VALVE ASSEMBLY.** John B. Parsons, Maumee, Ohio. Application Nov. 9, 1950, Serial No. 194,801. 1 Claim. (Cl. 251-139.) A solenoid controlled valve assembly

comprising an open ended casing of uniform diameter throughout, a flat washer-like centrally apertured disc closing one end of said casing and intimately fitting the inner wall thereof, a hollow valve-receiving fitting having a reduced extension projecting through and rigidly con-



nected to the walls of the disc aperture, a socket in the inner end of said fitting extension, a second flat washer-like centrally apertured disc snugly fitting within said casing and spaced from said first disc, an outwardly extending annular flange on said disc defining the central aperture thereof, a thin metallic sleeve snugly fitting said annular flange and enclosing said fitting extension, one end of said sleeve abutting said first disc, a second hollow fitting having an extension projection snugly into the other end of said sleeve, a rod-like cylindrical valve slidable in said sleeve and having a flat face at one end, a flattened surface on the exterior of the valve extending longitudinally thereof from end to end, a convex face at the other end of said valve providing a seating surface to abut against the inner end of said first fitting extension, a flat central portion on said convex face, a coil spring bearing at one end against said flat portion and having its opposite end portion disposed in said socket in said first fitting extension, an outwardly extending pin on said flat face of the valve and arranged to abut against the inner end of the adjacent fitting extension, and a solenoid winding about said sleeve and occupying the space between said washer-like discs.

**2,677,535. VALVE WITH FLOATING SEAT.** Andrew G. Johnson, Lakewood, Ohio, assignor to The Weatherhead Co., Cleveland, Ohio, a corporation of Ohio. Application May 20, 1949, Serial No. 94,383. 3 Claims. (Cl. 251-275.)



1. In a valve, a valve body, a bore in said body having a threaded portion and formed with a smooth, flat bottom surface, a first fluid passageway in said body intersecting the bottom surface of said bore, a second fluid passageway in said body intersecting the side wall of said bore adjacent the bottom surface thereof, a valve member threaded in said body having a smooth flat lower surface, limit means on said valve member and body to limit outward motion of said valve member, said body and valve member forming a chamber bounded on opposed sides by said flat surfaces and circumferentially by the side wall of said bore, and an annular flat sealing disc loosely mounted in said bore between said flat valve and counterbore surfaces, said disc having an aperture in communication with said first fluid passageway, the diameter of said disc being less than the diameter of said bore by an amount less than the difference between the radius of the bore and the radius of the aperture so that the side wall of said bore maintains substantial registry between said disc aperture and said first fluid passageway, said parts being arranged so that communication is established between said passageways with said valve member retracted but a slight distance from its closed position, regardless of whether said sealing disc adheres to said valve body or to said valve member, said limit means being disposed so that the maximum spacing of said surfaces is substantially less than the diameter of said disc, the diameter of said second fluid passageway also being substantially less than the diameter of said disc.

(To Be Continued)

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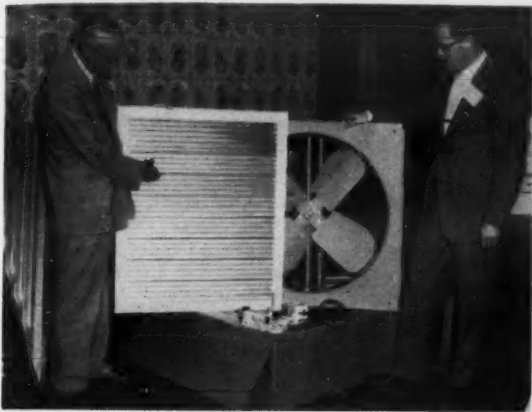
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E. B. Lau (l.), president of Lau Blower Co. of Dayton, shows Burt Sloane, Lau's New York sales representative, how to "do-it-yourself" with the Kooling Kit, Lau's new air exhaust fan, one of the products in the 1955 fan line.

## 'Lau Sales Clinic' Launches '55 Line Of Fans and Awards 'Doctors' Degrees

DAYTON—Forty factory representatives, salesmen, and executives of the Lau Blower Co. met here recently for the annual sales meeting which launched Lau's new 1955 line of fans.

Dubbed "The Lau Fan Sales Clinic," the meeting was patterned after a medical clinic with representatives and salesmen being awarded the degree of F. S. D.—Fan Selling Doctor—on completion of the two-day course. Meetings were held at the Miami hotel and Dayton Engineers' club.

Singled out for distinguished service in the face of competitive enemy fire was Burt Sloane, New York City representative, who sold 12,000 fans in a fiscal year.

The clinic was devoted to the

1955 Lau fan line with an accent on anticipated advertising, sales promotion, and publicity. Courses were given by Lau executives on selling policy, promotion, displays, new products packaging, and competition.

### J&L Research Center To Be Air Conditioned

PITTSBURGH — Construction started recently on Jones & Laughlin Steel Corp.'s new research center, which will be air conditioned.

The center, to cost initially more than \$1,500,000, will consist of several buildings, housing a research staff of about 100 and many of the latest research instruments.

## COIL ENGINEER

### Air Conditioning & Refrigeration Coil Manufacturer

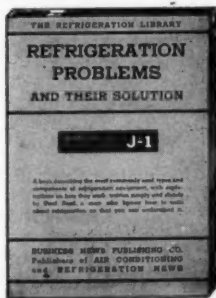
Leading Midwest manufacturer of air conditioning and refrigeration coils needs an aggressive, experienced engineer under 35 years of age. Salary open. Excellent opportunity for advancement for proper man with a progressive company established over 40 years ago. Submit detailed summary of experience and education in first reply. All replies confidential. BOX A5039, Air Conditioning & Refrigeration News.

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### PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request to the purchasing officer under which the purchase is listed in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date.

#### DEPARTMENT OF DEFENSE

Description	Quantity	Invitation No.	Opening Date
Post Purchasing and Contracting Office, Hq. 5th Armored Division, Camp Chaffee, Arkansas			
Repairs to cold storage plant, furnish and install refrigeration equipment.		55-17-B	4 Oct 54
Chicago Quartermaster Depot, Quartermaster Purchasing Div., Chicago, Illinois.			
Refrigerator, mechanically cooled, 8-cu. ft. capacity.	60 ea.	55-67-B	24 Sep 54

#### GENERAL SERVICES ADMINISTRATION

Description	Quantity	Reference No.	App. Bid Date
Business Service Center, General Services Administration, Region 3, 7th and D Sts., S.W., Washington 25, D. C.			
Valves check swing horizontal 125 lbs.	50 ea.	3R-49243	24 Sep 54

### Consider Air Conditioning For Ark. County Courthouse

LITTLE ROCK, Ark. — Under consideration is the possibility of installing an air conditioning system in the Pulaski County Courthouse next summer, according to County Judge Arch Campbell.

"If the project is found practical," Judge Campbell said, "I will ask the County Quorum Court to appropriate the funds when that body meets Nov. 15."

"A Little Rock engineering firm has estimated the cost of the project at \$133,000," he continued. "This estimate was by W. Terry Field, manager of the Associated Industrial Engineers."

Judge Campbell said the building's present heating ducts would be used to carry cool air from an air conditioning system in the basement. A separate unit would be used to cool the top floor of the four-story building.

The project would not include the old Courthouse, which faces Second St. The latter houses the offices of the sheriff, assessor, and Circuit Court Criminal Div.

### Spence Wins Bermuda Trip In Typhoon Sales Contest

BROOKLYN — It's 10 carefree days in sunny Bermuda for Larry D. Spence, district sales manager for the Typhoon Air Conditioning Co. in the west central territory, who won Typhoon's recent district manager sales contest.

The contest, which was held early this year, was set up to encourage the franchising of new dealers. Points were awarded for each new dealer signed up, and additional points for all business resulting from those franchises.

One of Typhoon's top district managers, Spence joined the company in 1950. Previously, he managed the air conditioning department of his father's firm, Gay Spence & Son, in Dubuque, Iowa. His present territory includes Illinois, Iowa, Missouri, and parts of Wisconsin, Minnesota, Nebraska, and Kansas, with headquarters in St. Louis.

### 3 Engineers Establish New Firm In Detroit

DETROIT—Announcement was made recently of the formation of a new Detroit firm, G H K Associates, engineers, industrial consultants, and designers.

Principles of the company are Octavius Germany, registered professional mechanical engineer who has participated in the engineering of large low temperature refrigeration projects; Richard Klees, Jr., registered professional electrical engineer; and John B. Harju, registered professional chemical and mechanical engineer who will be executive director of the new firm.

Offices of G H K Associates will be in the Garfield building in Detroit.

## Government Contracts

Gate valves 125 lbs pressure.	40 ea.	3R-49243	24 Sep 54
Valve globe bronze 300 lb pressure 1/2 in.	30 ea.	3R-49243	24 Sep 54
Valve globe bronze 300 lb pressure 1/2 in.	25 ea.	3R-49243	24 Sep 54
Valve gate 125 lb pressure rising stem.	175 ea.	3R-49243	24 Sep 54
Valve globe 125 lb pressure rising stem.	60 ea.	3R-49243	24 Sep 54

General Services Administration, Federal Supply Service, Room 212, Federal Bldg., Public Square, Cleveland, Ohio  
TOLEDO, OHIO USPO Job C&R 480 16 Sep 54  
Heating system repairs.

### CONTRACTS AWARDED THROUGH SEPT. 13

Tulahoma Dist. Corps of Engineers, Tulahoma, Tennessee  
Design, Procurement, Manufacture, Installation and Construction of Plenum Evacuation System for the Propulsion Wind Tunnel Facility.—Job. \$8,255,076 (Approx.).—Allis-Chalmers Mfg. Co. of Milwaukee, Wis., and Consolidated Western Steel Div. of United States Steel Corp. of Los Angeles, Calif. acting jointly as contractors and co-adventurers under the name and style of Allis-Chalmers-Consolidated Western, 737 Market St., Chattanooga, Tenn.  
Dist. Public Works Office and Office in Charge of Construction, Fifth Naval District, Naval Base, Norfolk 11, Virginia  
Warehouse-Cold Store Plant and Quarters Facilities, Camp Cafeteria, Marine Corps Base, Camp Lejeune, North Carolina NOY-80189.—Job. \$138,424.—Reid and Hope, 153 N. Main St., Suffolk, Virginia.

## CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications \$10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

#### POSITIONS WANTED

ADVERTISING, PROMOTION, sales executive experienced all phases of residential, commercial air conditioning marketing desires challenging new assignment. Created unusually effective promotion for successful 1954 season. Full knowledge newspaper, radio, TV advertising and promotion. Able to devise, direct successful sales training programs. Interviews desired. Will relocate. BOX A5045, Air Conditioning & Refrigeration News.

MANUFACTURER'S SERVICE manager with twenty-four years' experience which includes association with four leading manufacturers covering appliances, air conditioning and commercial. Can manage and administer all phases of headquarters service department. Work with top management in engineering, production and sales to formulate policies, service publications, promotions and training programs. Know distributor and dealer problems. Excellent health. Best references. BOX A5047, Air Conditioning & Refrigeration News.

ENGINEER DEGREE in mechanical engineering, also business training. Eighteen years with manufacturers of refrigeration and air conditioning equipment for systems under 100 tons, also domestic heating equipment. Desires position in service management, training, or technical sales. Will furnish complete resume and photo. BOX A5049, Air Conditioning & Refrigeration News.

INSTALLATION AND service. Commercial and industrial refrigeration, air conditioning, and heating. All sizes up through 300 ton systems. Thirty years in the business. Twenty years operating own. At present with one of Chicago's leading contractors. Want permanent position with company in Florida. BOX A5050, Air Conditioning & Refrigeration News.

#### POSITIONS AVAILABLE

MANUFACTURERS' REPRESENTATIVES to sell nationally advertised, amazing infra-red frankfurter rotisserie. Complete program of assistance. Commission basis. Potential earnings \$15,000 to \$25,000 per year. Leading sausage manufacturers admit Barbe-Cutie will make present methods of cooking sausages obsolete. BELL ENGINEERING COMPANY, 55 Munroe Street, Lynn, Mass.

WANTED MANUFACTURERS' representatives to cover Iowa, Wisconsin, Michigan, Missouri and Ohio, for special line of commercial refrigeration equipment. Nationally advertised. Reply to: FOWLER EQUIPMENT COMPANY, Aurora, Illinois.

FIELD SERVICE engineer for north-central part of the United States, living in or near Chicago. Age 27 to 42, with 10 or more years' experience, preferably food store refrigeration. No installation or service responsibility. We are looking for a capable man who wants to lay down his tool box for a better opportunity. One of the largest manufacturers of food store equipment has an excellent opportunity for a man free to travel in a definite territory without family interference. Salary, expenses, insurance, etc. Also, we need a man for the southeastern states, to live in Atlanta, Georgia. Apply by letter, giving full particulars, with recent photograph. BOX A5044, Air Conditioning & Refrigeration News.

WANTED—MANUFACTURERS' representatives with following among wholesalers and manufacturers to handle well-known line of thermostatic expansion valves being introduced into the United States for the first time. Valve has many outstanding features, and will prove a good volume and profit item for aggressive representatives. BOX A5048, Air Conditioning & Refrigeration News.

WANTED MANUFACTURERS' representatives to sell new 1955 line of quality forced draft cooling towers in Chicago and St. Louis territories. Prices very competi-

tive. State lines handled and give references. BOX A5051, Air Conditioning & Refrigeration News.

#### EQUIPMENT FOR SALE

SLIGHTLY USED—excellent condition. One 8-foot long McCray frozen food cabinet, one 10-foot long McCray triple duty cabinet, (serve meats—upper & lower shelves—from rear, and in front "help yourself" to dairy foods and/or vegetables). Either of above, with 1/2 h.p. unit @ \$600.00, f.o.b. warehouse in Hagerstown, Maryland. Not crated, come and see them. Phone or write FOSCO, INC. Telephone 2210.

FOR SALE: Brand New Popular Brand Supermatic -Hermetic Domes—1/2 H.P. \$40.00—1/4 H.P. \$42.50—1 H.P. \$45.00. Complete with relay and capacitors. Model R 5 and 7 1/2 H.P. Compressors \$115.00. Details supplied on request. Send for refrigeration parts and supplies catalog listing many other sensational values. WALTER W. STARR REFRIGERATION, 2833 Lincoln Ave. Chicago 13, Illinois.

COMPLETE 150 ton air conditioning equipment including 2 Westinghouse compressors, controllers, chiller, condenser, pumps, cooling coil, aquastats, etc. All this equipment has never been used and is offered at approximately half price. We invite your inspection. GROVER C. WATKINS COMPANY, 1851 North 8th Street, Paducah, Ky. Phone 3-1655.

#### FRANCHISES AVAILABLE

FOR SALE—Air conditioning distributorship in southeast. Top line franchise in twenty counties. Good reputation in contract sales, installation, service, and sheetmetal department. Volume \$300,000. Dealer dept. could double present volume. Price approx. \$50,000 to \$60,000 cash. Principals have other interest. No brokers. Reply BOX A5046, Air Conditioning & Refrigeration News.

#### BUSINESS OPPORTUNITIES

DISTRIBUTOR WANTED for New York City by nationally known manufacturer of packaged air conditioners and room air conditioners. Must be well-established and have a successful history in this field. All replies strictly confidential and must be on your letterhead. BOX A5053, Air Conditioning & Refrigeration News.

#### MISCELLANEOUS

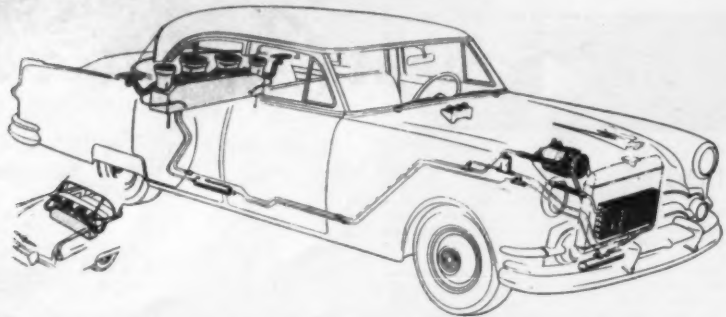
BUILDING SOLD, must vacate. Store fixtures, commercial refrigeration store equipment for supermarkets, delicatessens, dairy, bakery, restaurants and meat markets. Consisting of Hill, Tyler, Huesmann, Anheuser Busch, Super Cold reach-in refrigerators, freezers, vegetable, meat, delicatessens and bakery cases. Salad counters and ice cream cabinets. 150 condensing units, motors, blowers, coils. Copeland, Brunner, Servel, Mills, etc. refrigeration parts. Porcelain, scrap metal, cork, fibre glass, plate glass, marble, shelving standards, hardware, metal moulding, refrigerator doors, cash registers, safes, book-keeper's desk, carpenter's bench, power saw, clamps, tools and other articles too numerous to mention. This is one of the largest stocks of new and used equipment sold at auction in some time. Max Scheinberg, auctioneer, will sell at public auction, Friday, September 24, 1954, 11:00 a.m. at 609-611 De Kalb Ave. corner Nostrand Avenue, Brooklyn, N. Y. 25% deposit required. Everything must be removed by Oct. 1, 1954. Premises phone UL 5-4224.

SERVICEMEN—DEALERS: If it's sales you want, here's your answer. Norge replacement unit low as \$46.50 exchange f.o.b. Detroit. Coldsport and Tecumseh units remanufactured. Authorized factory repair station for room air conditioners. For full particulars, call or write MODERN REFRIGERATION COMPANY, 12541 E. McNichols, Detroit 5, Mich.

BOTHERED WITH handling problems on refrigerators and freezers? Better contact us for details on our new (1955 model) Dual Truck. Dept. R. ROLL-OR-KARI COMPANY, Zumbrota, Minn.

MIDWEST MANUFACTURER completely tooling and equipped to produce in quantity and quality, beverage coolers and direct draws for other companies under this label. Limited shipment can be arranged. Address all inquiries to BOX A5043, Air Conditioning & Refrigeration News.





DRAWING shows how control knobs are located accessibly above the steering column, compressor and condenser are under the bonnet, the refrigeration unit is installed in the trunk, and outlet air ducts are at the rear of the back seat.



IN A DEMONSTRATION of air conditioning last month, Packard Dallas distributor, W. O. Bankston, Bankston-Hall Motors, equipped all his demonstrators with air conditioning units, sent two models with a large temperature gauge into downtown Dallas on afternoons when the temperature went above 90°. They interviewed women on their reaction to the air conditioning while driving around the block and presented them with an invitation to borrow a courtesy car for a week-end.

## Auto Air Conditioning Demand--

(Concluded from Page 1, Col. 5) those optional equipment items were first introduced.

Bankston-Hall Motors, Packard Dallas distributor, estimated it would lose 10% of its new car business during the hottest summer months if it did not have air conditioning units.

### PRICE REDUCTIONS INDICATED

The automobile industry's newest and most expensive accessory, air conditioning is living up to market forecasts, and price reductions are indicated, Clare E. Briggs, Packard's sales vice president, said.

In Texas, industry field reports showed 5% of all new cars, 15% of medium and higher price models, and 45% of luxury cars with air conditioning. Packard itself is slightly ahead of these averages with 20% of its Clippers and 55% of its Packards sold in Texas being purchased with air conditioning.

A doubling of unit sales is indicated in 1954 over last year, and units for all makes of cars are a probability in the next two years. Air conditioning engineers and dealers well may look for rapid advances in development of a combination heating-cooling unit concurrently with a substantial increase in field kit installations and in servicing business, Briggs said.

Automobile industry dollar volume in 1954 is expected to exceed \$30 million on factory installations of 60,000-65,000 units. Field kit installations by independent firms should add another 20,000 units.

Last year there were 28,600 factory units and 12,000 non-factory units sold, according to Packard estimates.

Ten car makes now offer the ap-

pliance. Two of these were new in 1954 and three more are scheduled for 1955. Industry observers see sales approaching 100,000 factory units for 1955. The large home and office air conditioning demand in the postwar period is credited as a major stimulus to acceptance, he said.

Although little promotion has been put behind auto air conditioning yet, many car dealers have made the air conditioning units work for them. One Fort Worth dealer installed air conditioning on his reconditioned used cars, and saw volume rise 12%. An Amarillo dealer air conditioned all his demonstrator cars, sold the demonstrators when he could not get air conditioning units for immediate installation on floor models.

### SOME PROMOTE IT WITH ONLY WINDOW POSTERS

Many Texas dealers report that customers coming in to buy field kits for their old cars have left with new cars. Many say no other promotion than window posters on air conditioning in that hot weather market has increased floor traffic. The availability of field kits for dealer installation in the customer's choice of car has even influenced which car brand and dealer got the business.

W. O. Bankston, of Bankston-Hall Motors, said that his 8-hour air conditioning installation service, as against a three-week wait for factory installation, was directly responsible for 27 new car sales to owners of other brand automobiles in August.

Many factors in the current market indicate continuing gains in acceptance for the appliance. Stiffening competition will keep research and promotion at an accelerated rate. This eventually will bring prices down. With cost re-

ductions, availability of the units on lower price cars is anticipated.

Finally, competition will continue strong among the non-car manufacturers. There are an estimated 100 independent firms with units now, but four of them do 90% of the business.

### COMBINATION HEATING, COOLING UNITS HOLD FUTURE

"Although its rise has been rapid, automobile engineers say the future is in the combination heating and cooling units," says the Packard report. "Packard has carried out a continuing development program on the combination unit type. By the year 1956 such combination units should dominate the air conditioning field, and they will clear engine compartments and trunks, reduce piping, and improve radiator efficiency. Improvements and refinements of present equipment are the immediate prospect.

"All present systems use a normal refrigeration cycle. Compressor and condenser are in the front of the car. In three of five systems the evaporator is mounted in the trunk behind the rear seat, the others in the engine compartment and under the instrument panel.

"Cooled air is delivered through ducts above the windows, through outlets in the package shelf, or from each side of the dashboard. The systems use 25-30% fresh air."

Packard air conditioning engineers claim the combination of a heating and cooling unit will bring nearly a 50% cost saving. Assembly line car installation will be practical with such units. Now they usually are installed off the line.

### TEXAS LEADS FIELD

Texas has been the biggest single market thus far with 16,000 units last year and doubled sales anticipated this year, Briggs said. Field kit installations are running 75% of these, although 50% of installations in other good market states.

Location of several of the large field kit manufacturers in Texas and resulting shorter delivery lead time, largely has accounted for the percentage of kit sales there. The field kits are now available for all makes, and can be installed in most of the upper priced 1953 and 1952 models.

Best customers in the Bankston-Hall Packard distributor zone of northern Texas, New Mexico, and Oklahoma thus far this year have been salesmen and businessmen who have to use their cars two or three times a day. Best salesmen of the units themselves have been the servicemen in dealer garages, the distributor said.

One of his Texas dealers reported 80% of air conditioning sales were made after the customer had taken delivery of the new car and had brought the car back for service check-ups.

## Amana Ups Labor Force As Consumer Demand For Freezers Increases

AMANA, Iowa—A full Saturday shift was added last week at the plant of Amana Refrigeration, Inc., in order to meet heavy consumer demand for its freezers, the company announced.

In addition to going to a six-day work week, the plant's over-all labor force is being increased by about 17%, and together these moves are designed to boost production 25%.

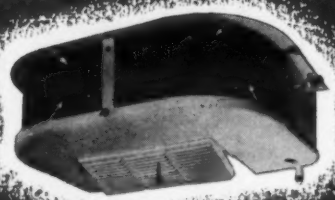
Size of the Amana plant was doubled and productive capacity was trebled this year by the completion of a \$3,500,000 expansion program.

Amana is back-ordered on all six of its freezer models at present, it was reported by George C. Foerster, executive vice president. There is greatest demand, he said, for the company's 12, 15, and 19-cu. ft. "Stor-Mor" upright freezer models, and these occupy 60% of Amana output.

Much of the increased demand for its freezers stems from the success of freezer-food plans which have been set up by Amana dealers throughout the country, including appliance dealers, department stores, locker plants, and specialty selling organizations, the company stated.

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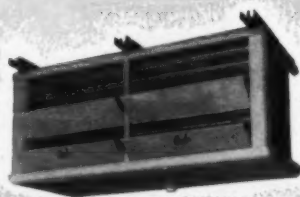
**DJ UNIT COOLER** — Ideal for reach-ins. Compactly designed and ceiling mounted to allow complete use of shelf space. Air moves through coil, down back wall . . . providing perfect air diffusion and eliminating air blasts. Completely guarded fan, removable drain pan, permanently lubricated motor.



**WJ UNIT COOLER** — Installation at juncture of wall and ceiling conserves valuable storage space. Air is drawn through the coil rather than blown out across the coil — eliminating blowing condensation onto product or box. Easy to install, simple to service.



**THERM-O-CYCLE** — The modern refrigeration system featuring simplified hot gas defrosting. Dependable, fully automatic operation. Utilizes room air for defrosting. Simple installation . . . economical, frost-free evaporator operation . . . convenient servicing.



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